



Gamma Ray
Natural Formation Evaluation

Real Time Log

Scale:

Company: Anadarko

1:240

Well: D&C FARMS 14N-33HZ

Measured Depth

Field: Weld County (Kerr McGee)

Region: Rocky Mountains Country: United States

Status:

Final Print

Surface Location:

Latitude: 40° 1' 0.793" N

Longitude: 104° 53' 49.790" W

Other Services:

API Number:

051233789400

SEC: 28

TWN: 1N

RGE: 67W

Directional

Permanent Datum (P.D.): Ground Level

Elevation:

5010.00 ft.

Elevations:

Log Measured From:

Rig Floor

16.00 ft.

Above P.D.

KB:

N/A

Depth Reference:

Driller's Depth

GL:

5010.00 ft.

Interval Logged

Dates

Magnetic Field Reference

Top: 6893 ft. Date From: 01/Oct/13 Dip Angle: 66.33° Azi Reference North: True

Bottom: 12618 ft. Date To: 05/Oct/13 Total Mag to Reference

Spud Date: 01/Oct/13 Field Strength: 52746.0 nT North Correction: 8.46°

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
8.750 in.	1021 ft.	7910 ft.	9.625 in.	36.00 lb/ft	Surface	1053 ft.
6.125 in.	7910 ft.	12668 ft.	7.000 in.	26.00 lb/ft	Surface	7890 ft.

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based	Surface	7910 ft.	8.750 in.	85 ft.	0.3° / 229.5°	0.7° / 311.8°
LSND	7910 ft.	12668 ft.	8.750 in.	43 ft.	0.7° / 311.8°	88.2° / 178.3°
			6.125 in.	85 ft.	88.2° / 178.3°	88.0° / 180.0°
					/	/
					/	/
					/	/
					/	/

Acquisition System

Software Version

Other

Advantage 2.20U4 Rig: Contractor: Xtreme 24 / Xtreme Coil Drilling Corp

PATS 6.4.1.34 Job No: 5793100 / D & E

District / Unit: RMD

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Log Run Summary

LWD Run No.	BHA Run No.	Bit Run No.	Bit Size (in.)	Bit Type	Bit Gauge Length (in.)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time				Circ. Time (hrs.)
							Top	Bottom	From	To	Start		End		
							(ft.)	(ft.)	(ft.)	(ft.)					
1	1	1	8.750	PDC	2.000	Steerable	6881	7855	6948	7910	01/Oct/2013	11:00	02/Oct/2013	01:00	25.8
2	2	2	6.125	PDC	6.000	Steerable	7863	12618	7910	12688	03/Oct/2013	05:45	05/Oct/2013	05:25	33.8

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Marcus Boucher	29/Sep/2013	01/Oct/2013	Austin Small	29/Sep/2013	06/Oct/2013	Osagie Otoikhine	01/Oct/2013	06/Oct/2013

Mud Properties Record

Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density (ppg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
01/Oct/2013	18:00	1	7305	Drill Water	9.7	9	8.6	N/A	0.0/99.3	Flowline	900	N/A
02/Oct/2013	18:00	1	7910	LSND	9.7	12	8.6	N/A	0.0/92.3	Flowline	1100	N/A
03/Oct/2013	18:00	2	8090	LSND	8.9	11	9.3	N/A	0.0/95.8	Flowline	1400	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent 0.5 ft. Avg.	API
GRIX	Gamma Ray Density	Points
GRSI	Gamma Ray Slide Indicator	Unitless
GRTX	Gamma Ray Time Since Drilled	min
ROPA	Rate of Penetration 3.0 ft. Avg.	ft/hr
TCDX	Downhole Temperature	deg F
TVD	True Vertical Depth	ft
WOBA	Surface Weight on Bit 1.0 ft Avg.	klbf

Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (ft.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12440863	Directional	58.05	6.750	3.250
1	SRIG	11703934	Gamma	54.68	6.750	3.250
2	DIR	10152197	Directional	49.82	4.750	2.500
2	SRIG	12595022	Gamma	46.44	4.750	2.500

Service and Tool Mnemonics

Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

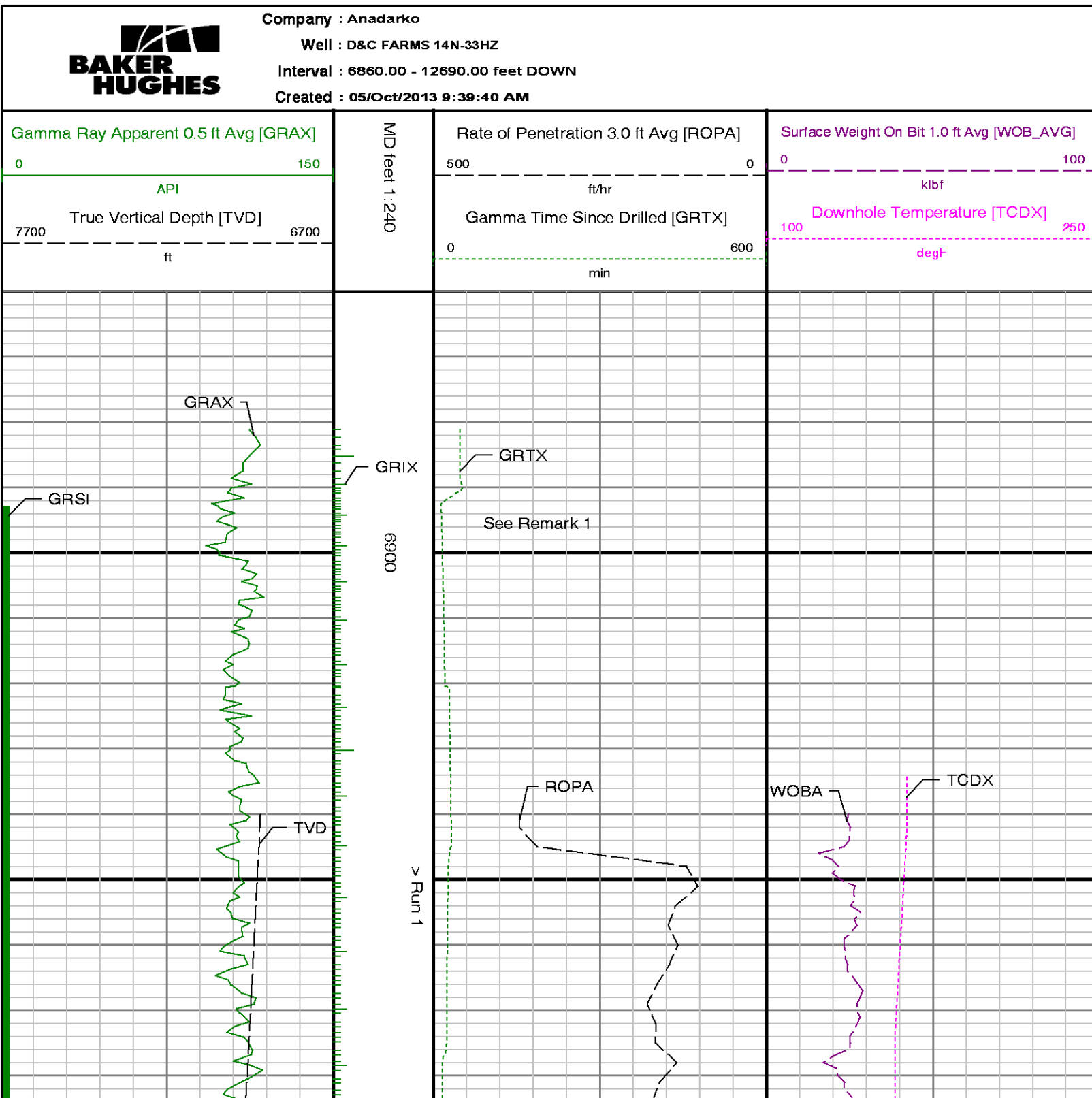
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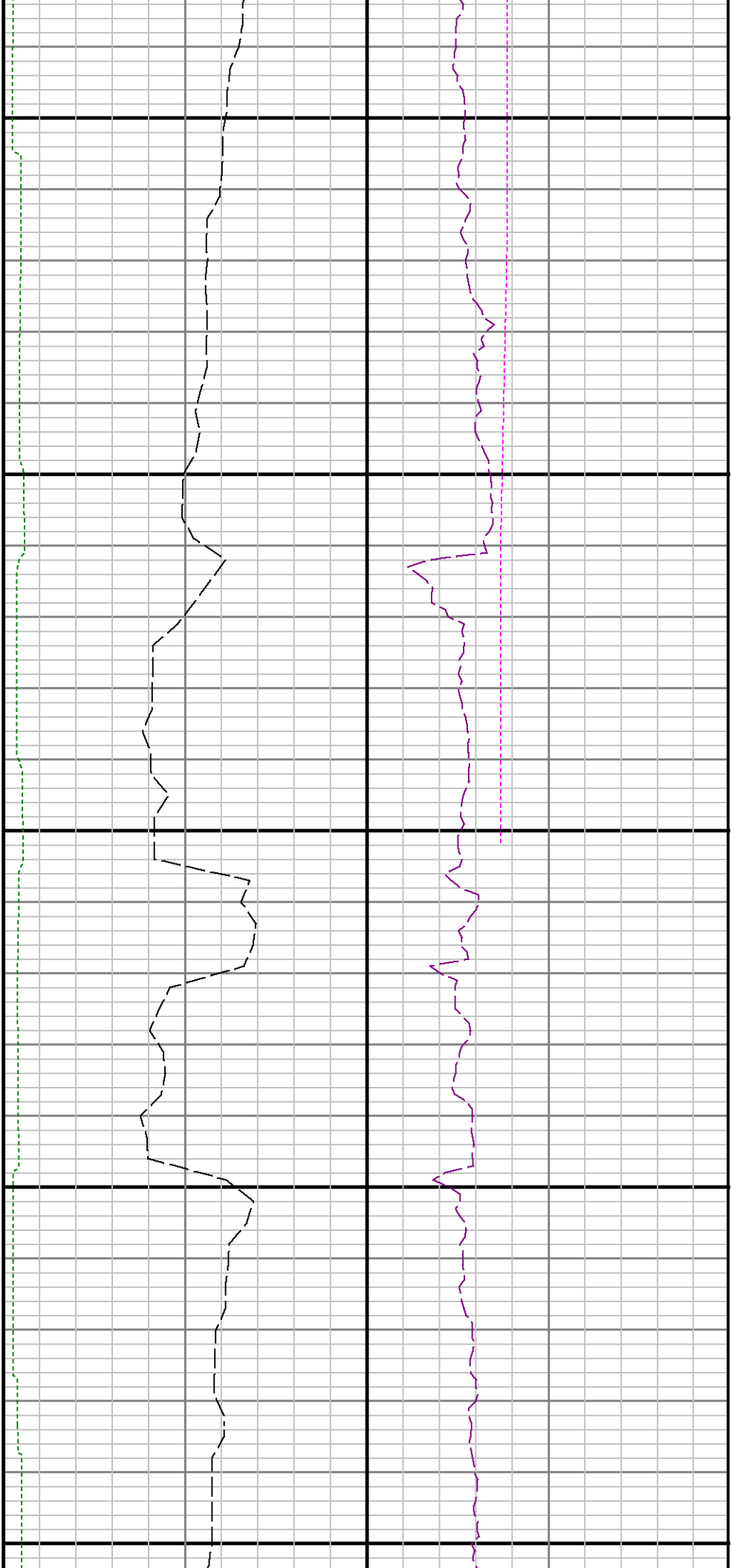
<p>1) Baker Hughes INTEQ run 1 utilized 6 1/2 inch NaviGamma(Gamma Ray and Directional) behind a 8 3/4 inch bit and steerable assembly from 6948 feet to 7910 feet MD (6927 feet to 7522 feet TVD).</p> <p>2) Baker Hughes INTEQ run 2 utilized 4 3/4 inch NaviGamma(Gamma Ray and Directional) behind a 6 1/8 inch bit and steerable assembly from 7910 feet to 12668 feet MD (7522 feet to 7545 feet TVD).</p> <p>3) A sliding indicator is shown to the left edge of track 1 as a heavy line. The indicator has been depth-shifted to the gamma sensor offset to correspond with gamma data acquired while sliding.</p>
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Remarks

Number	Measured	Hole	LWD	Remark
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	Depth (ft.)	Section (in.)	Run No.	
1	6881	8.750	1	The interval from surface to 6881 feet MD (6860 feet TVD) was not logged since logging services began at kick off point.
2	7911	8.750	1	Interval from 7855 feet to 7911 feet MD (7521 feet to 7522 feet TVD) was logged more than 29 hours after drilling due to tripping for casing and cementing operations and picking up lateral BHA.
3	12618	6.125	2	Interval from 12618 feet to 12668 feet MD (7543 feet to 7545 feet TVD) was not logged due to gamma ray sensor offset at well TD.

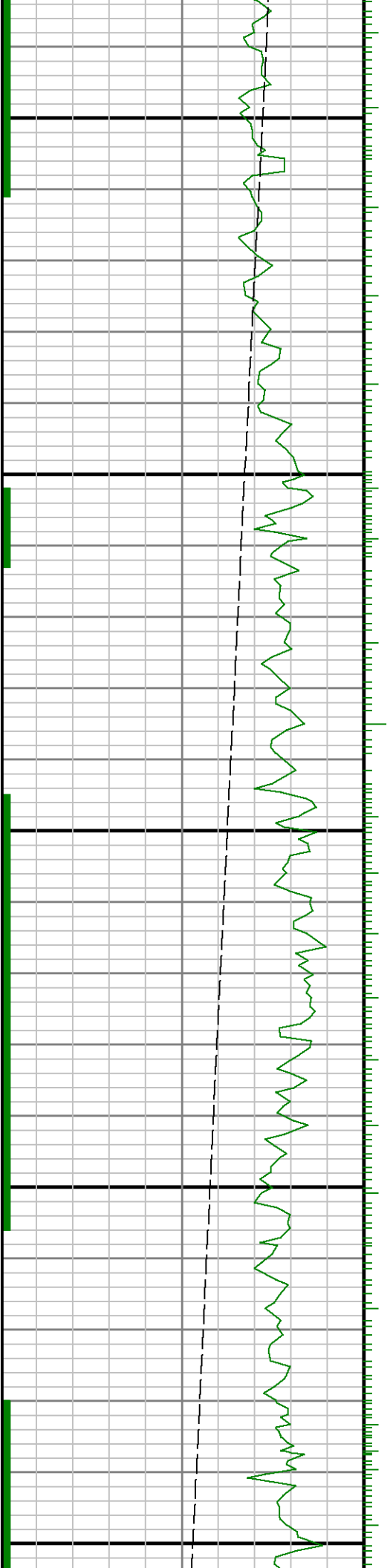


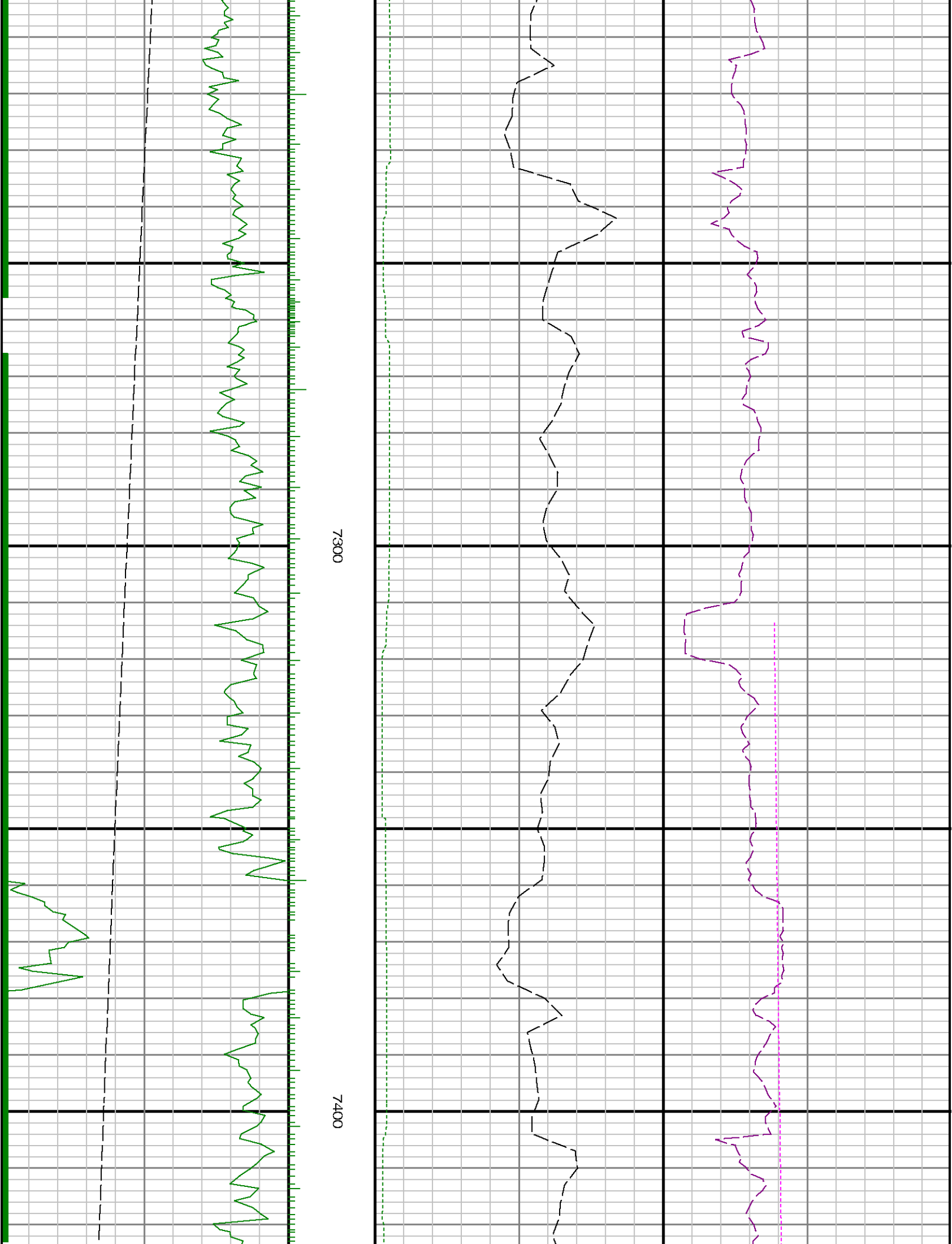


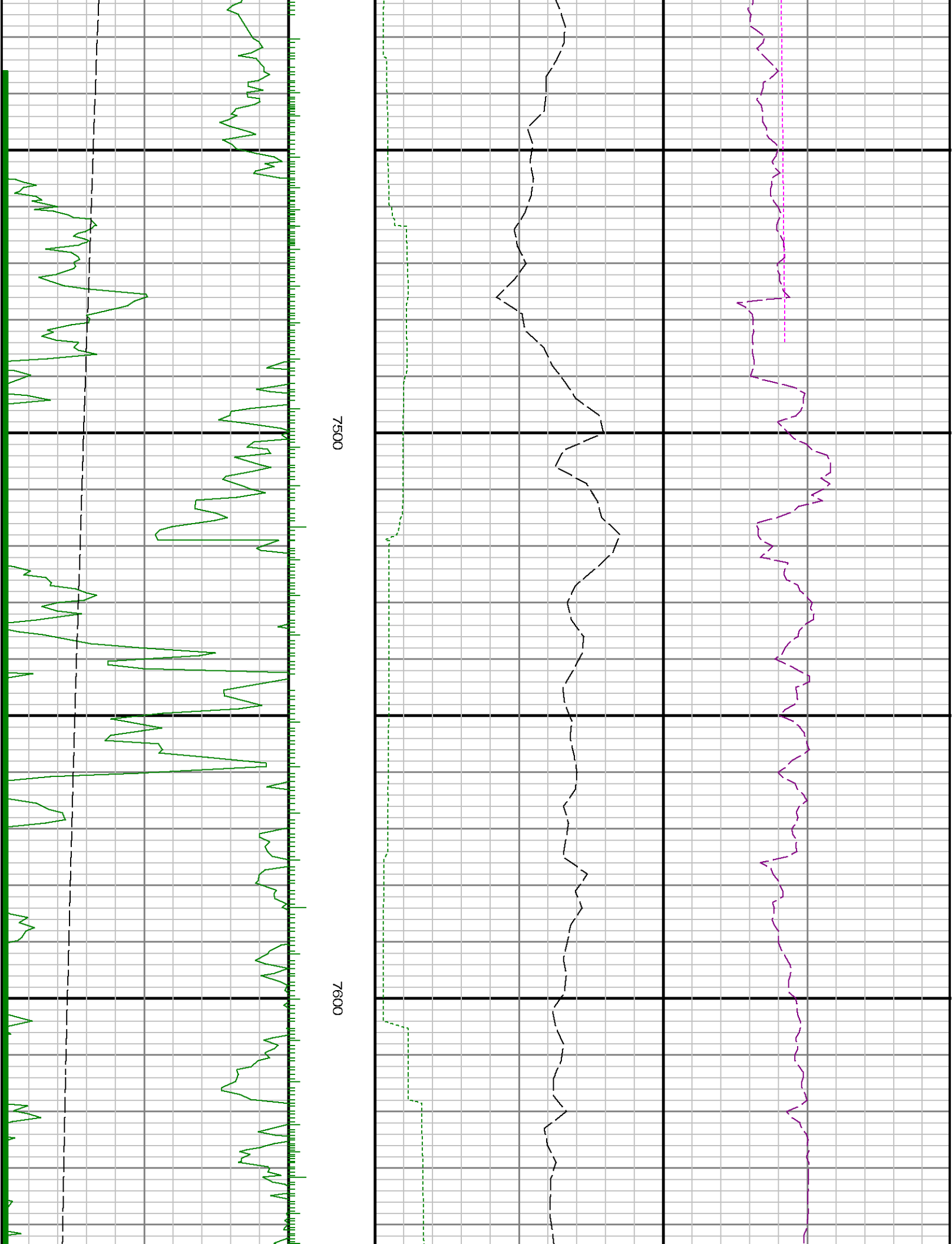
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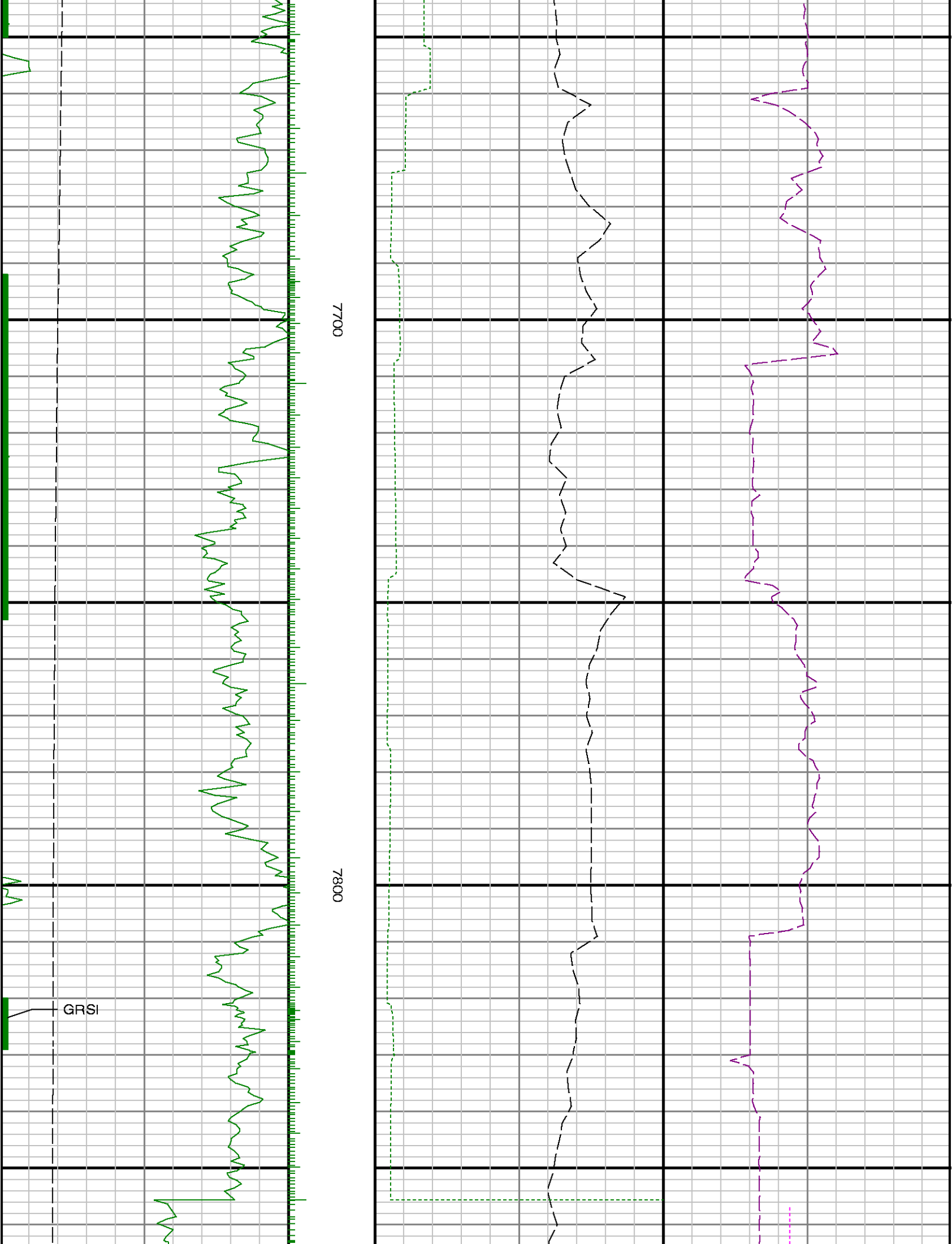
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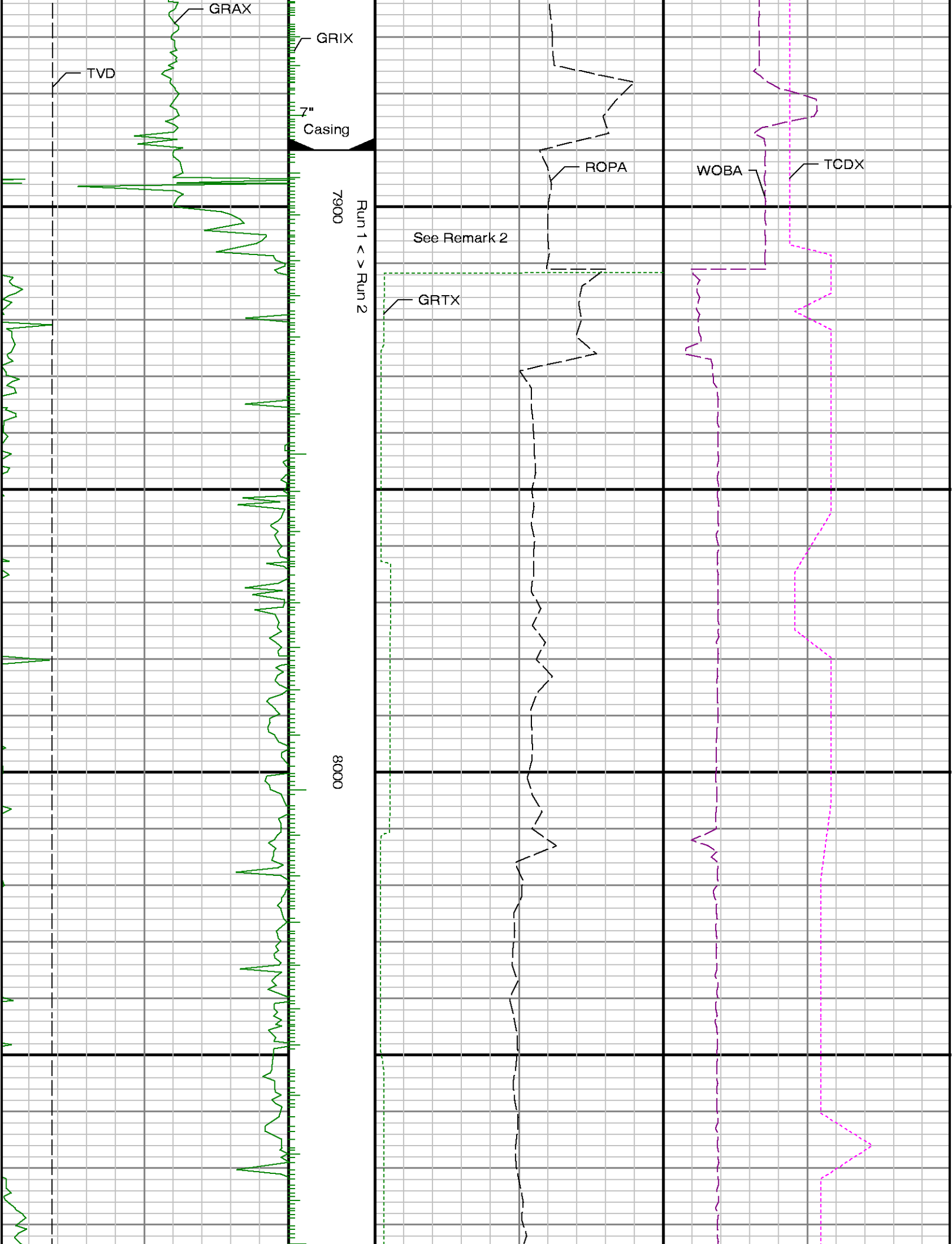
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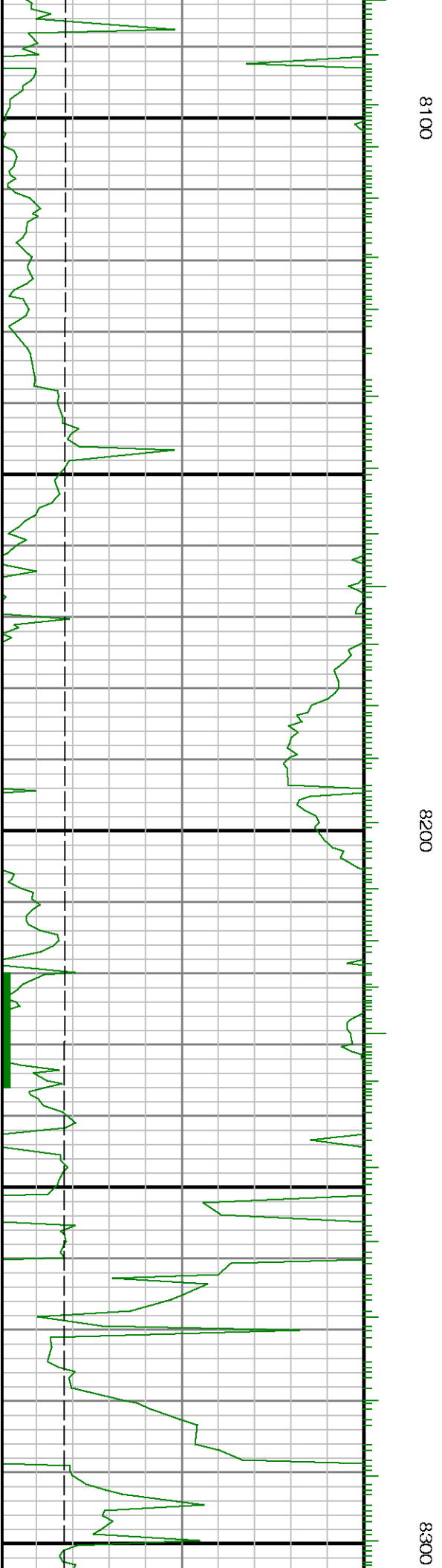
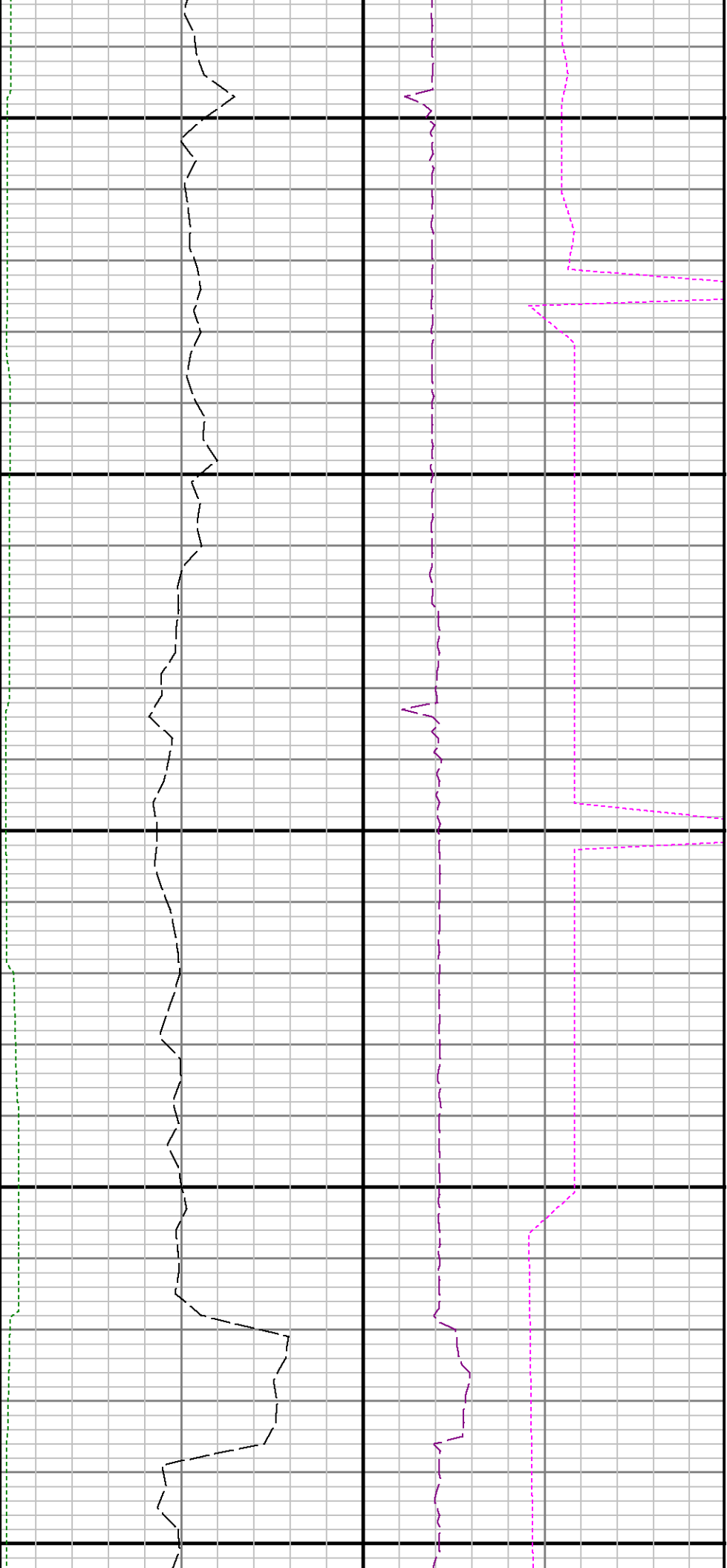


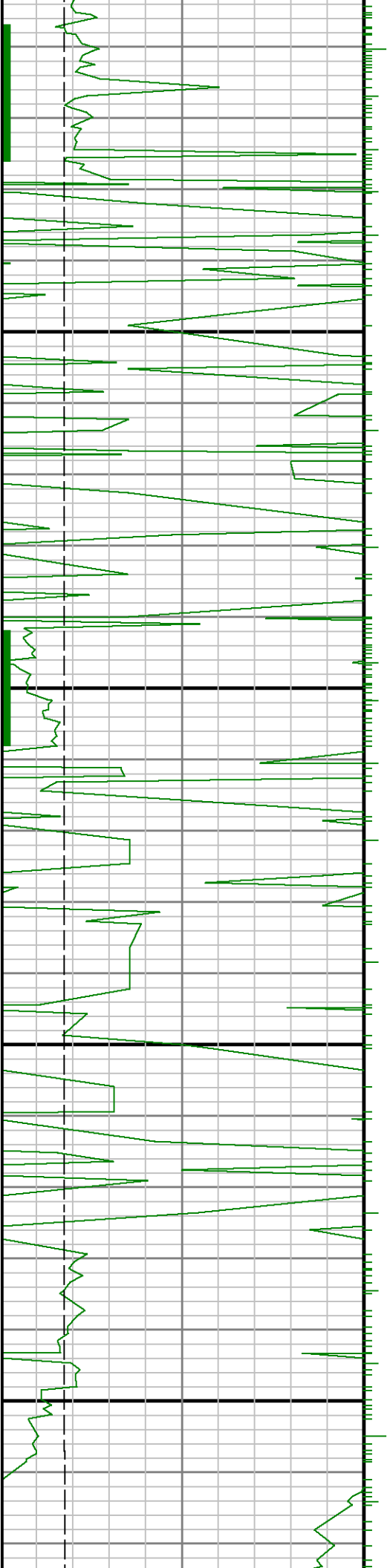






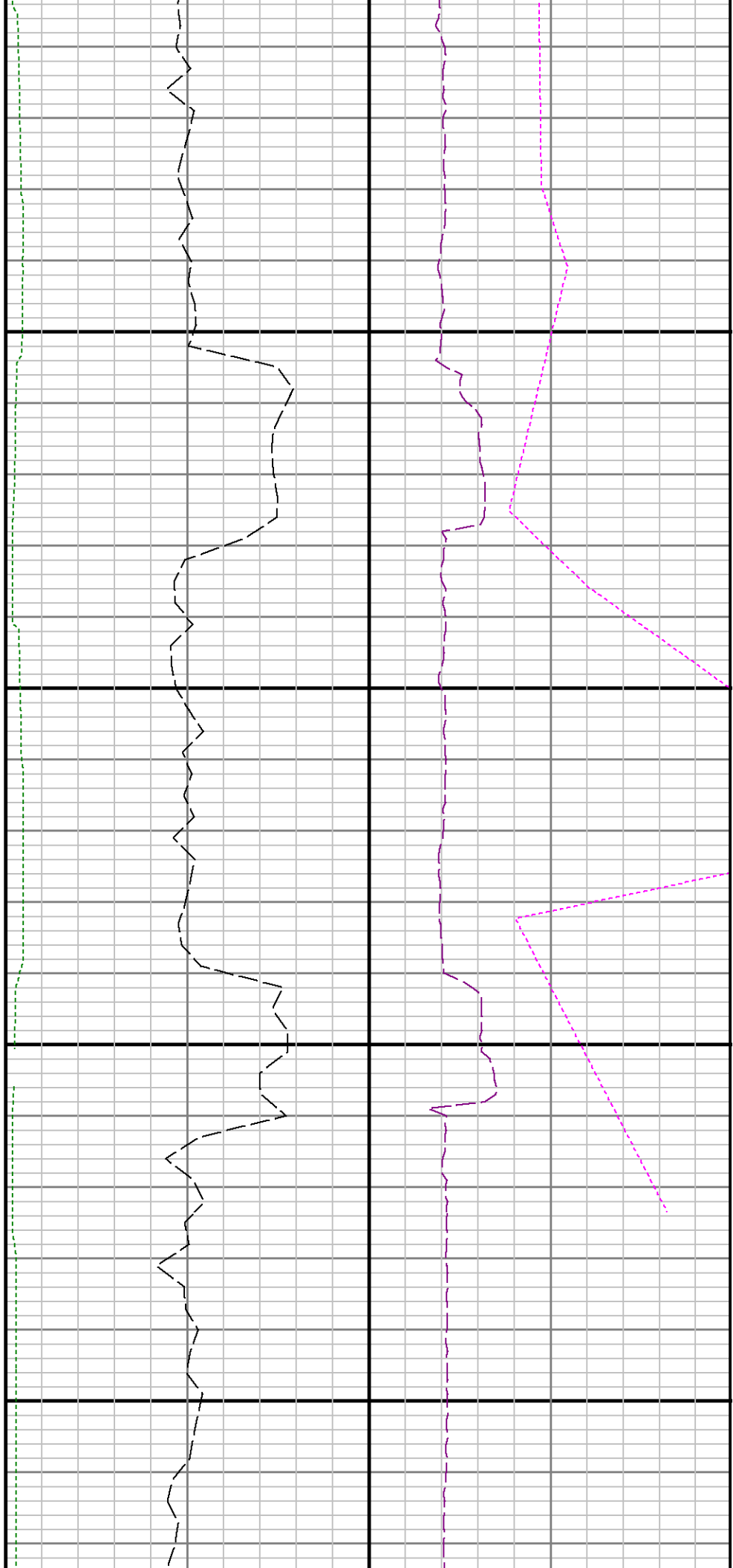


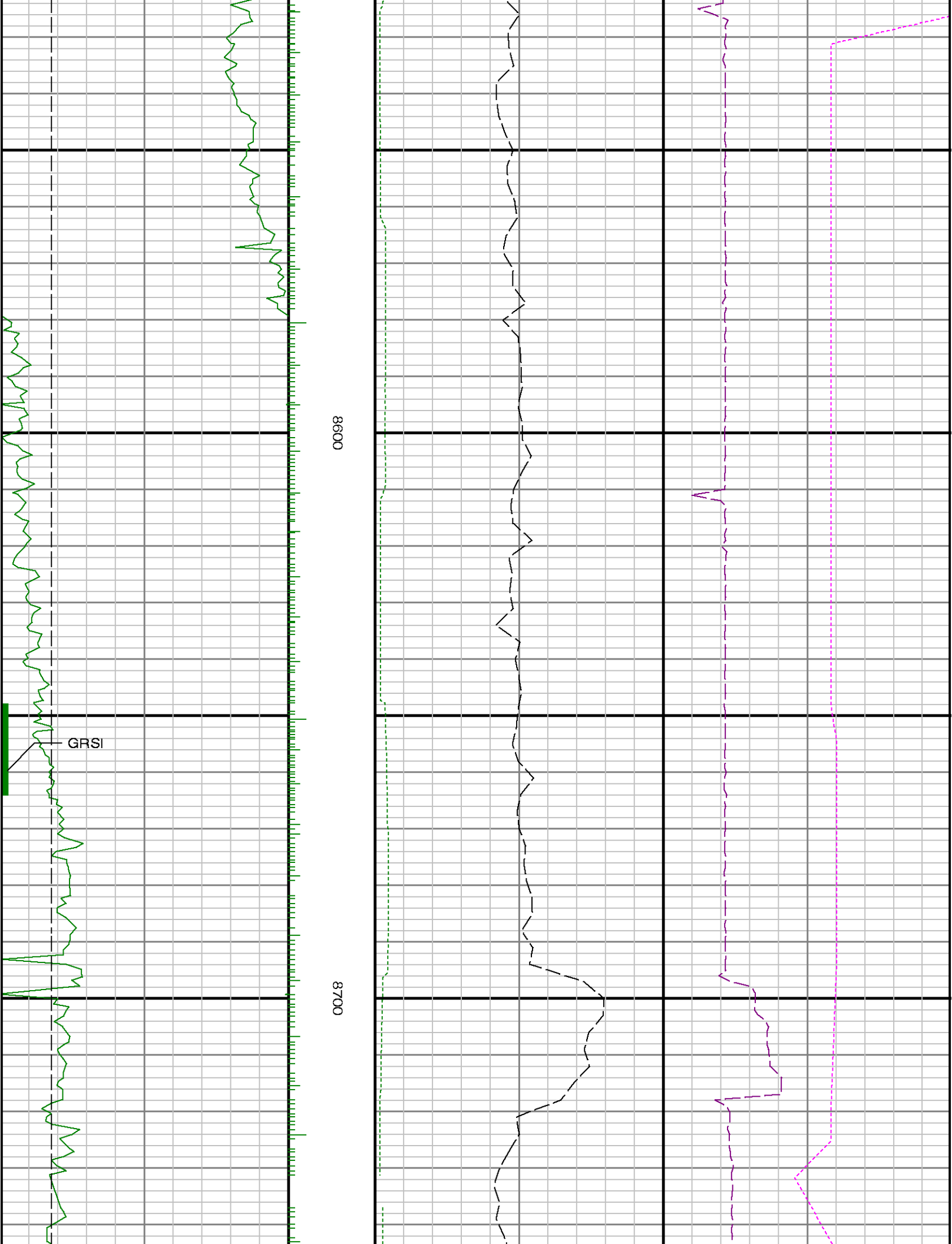


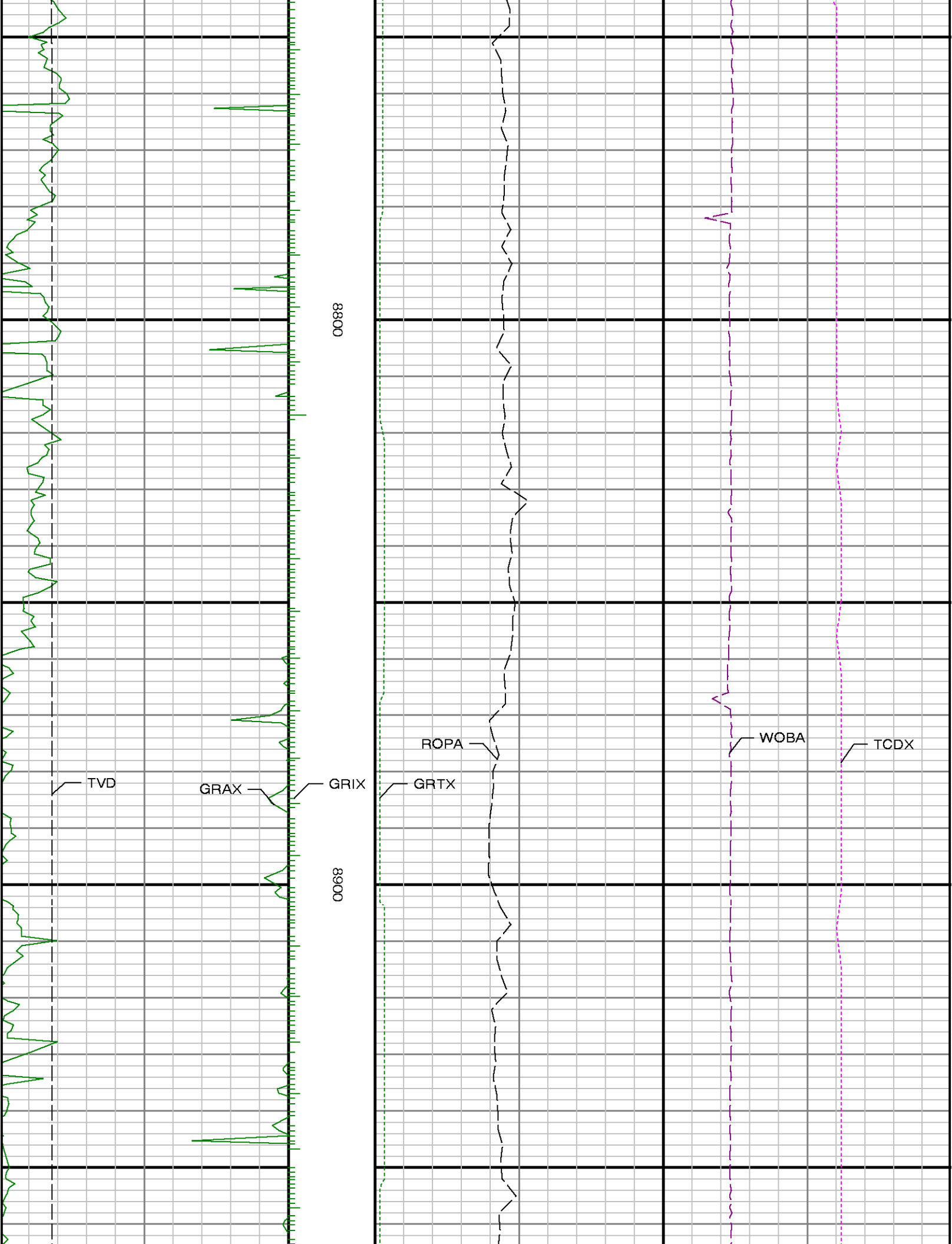


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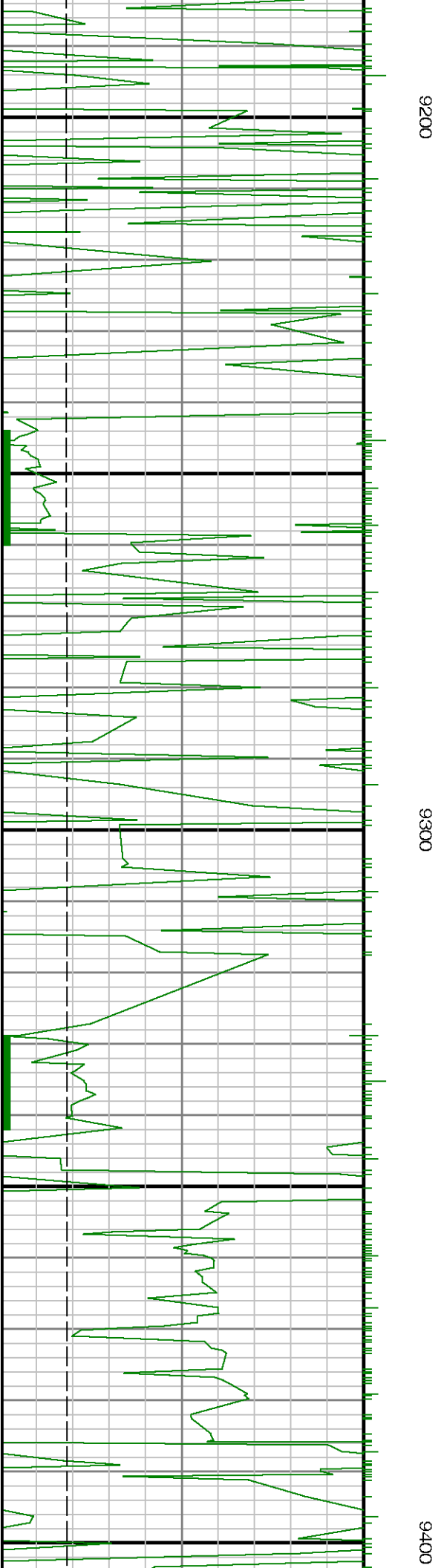
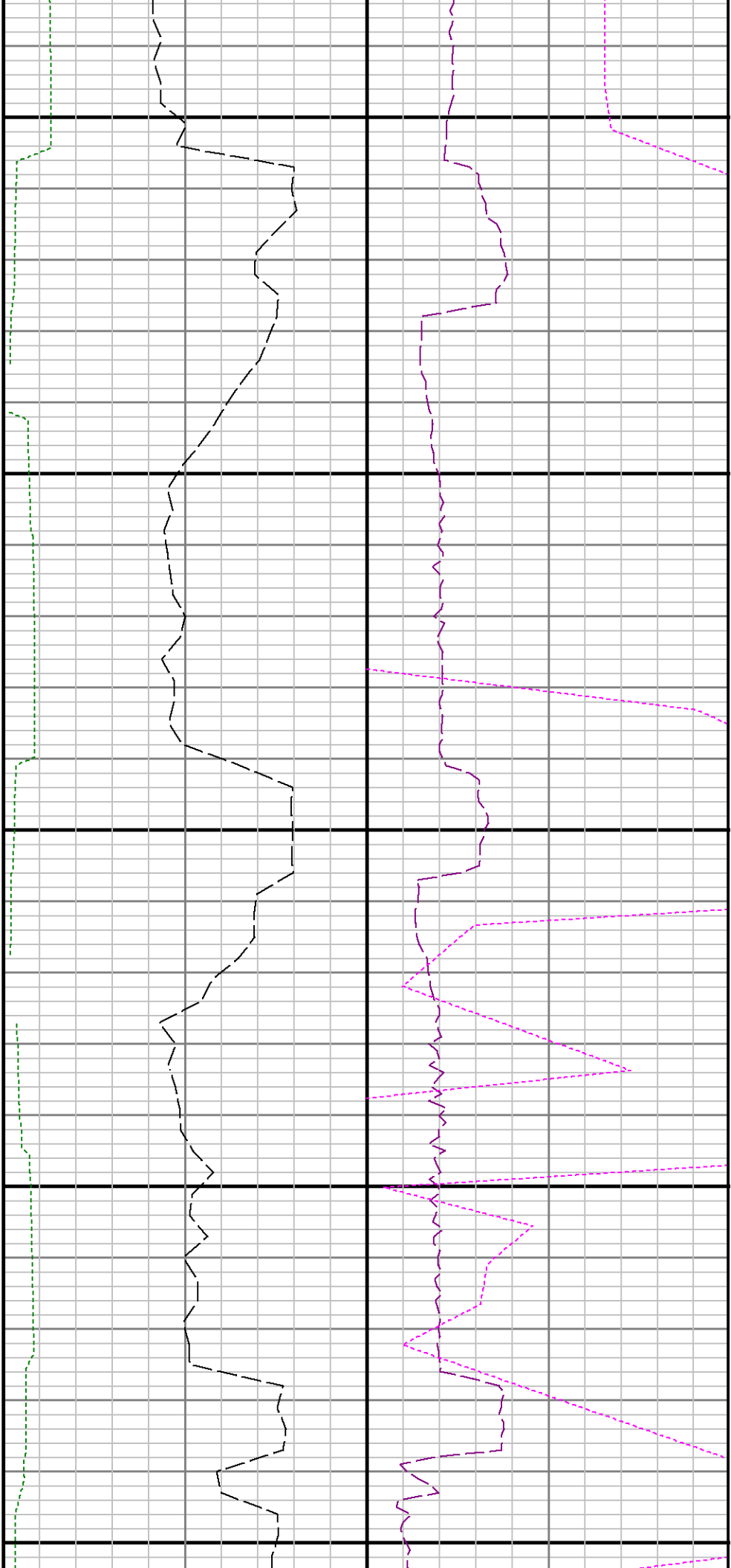
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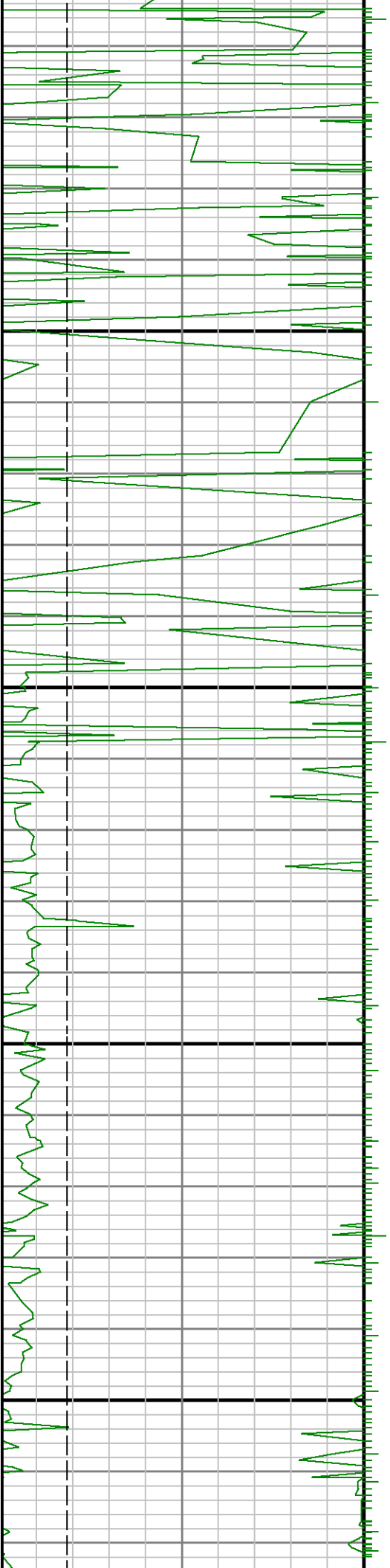






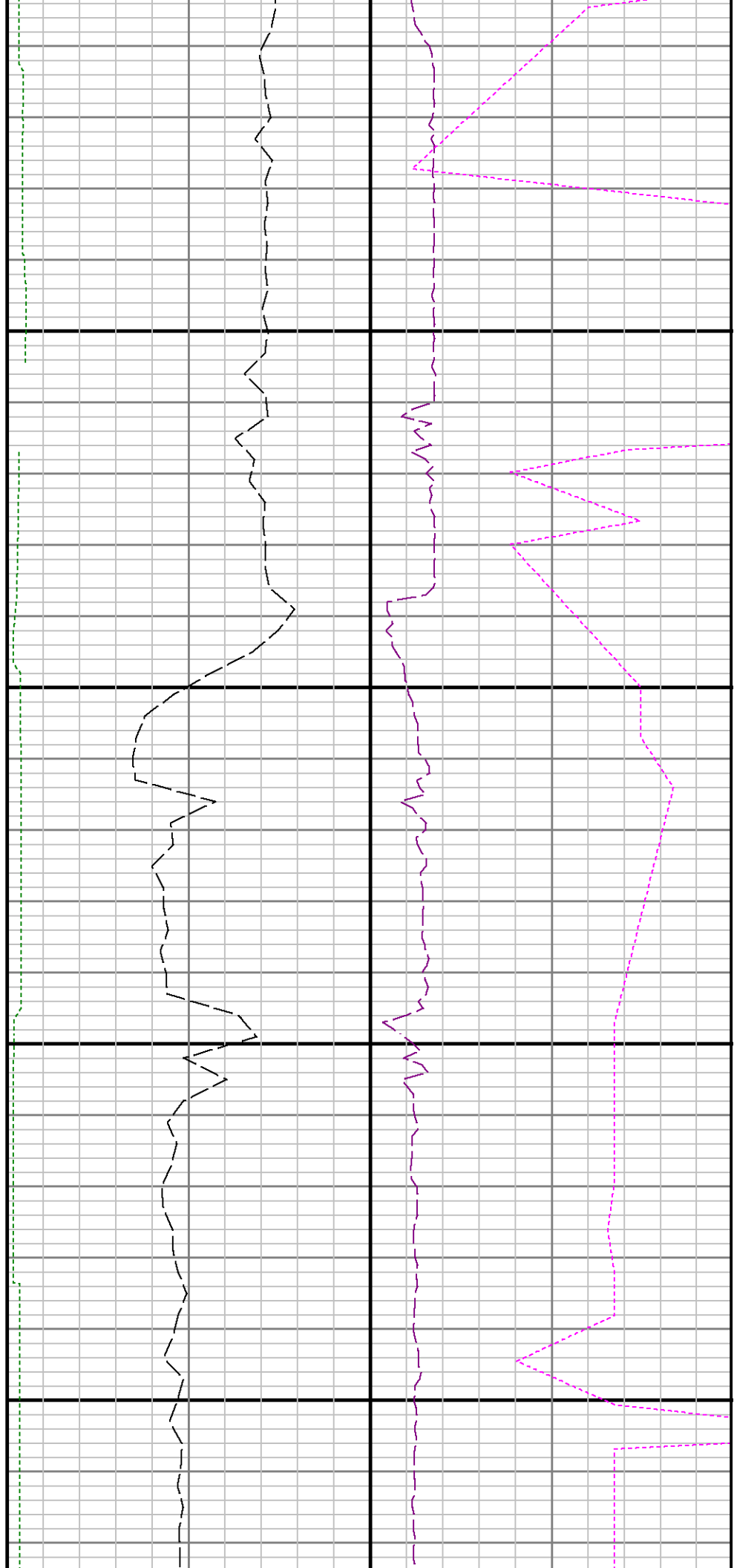


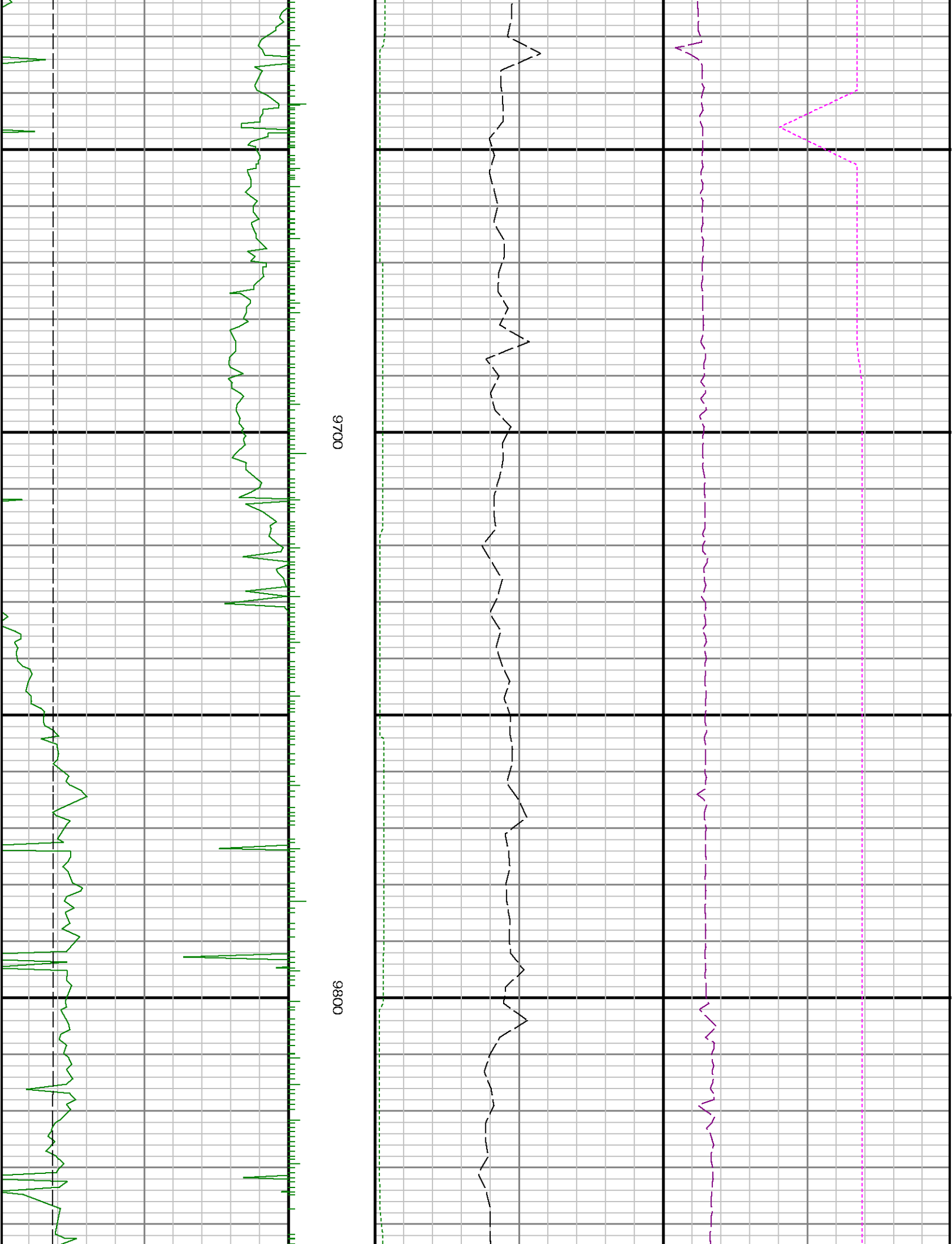


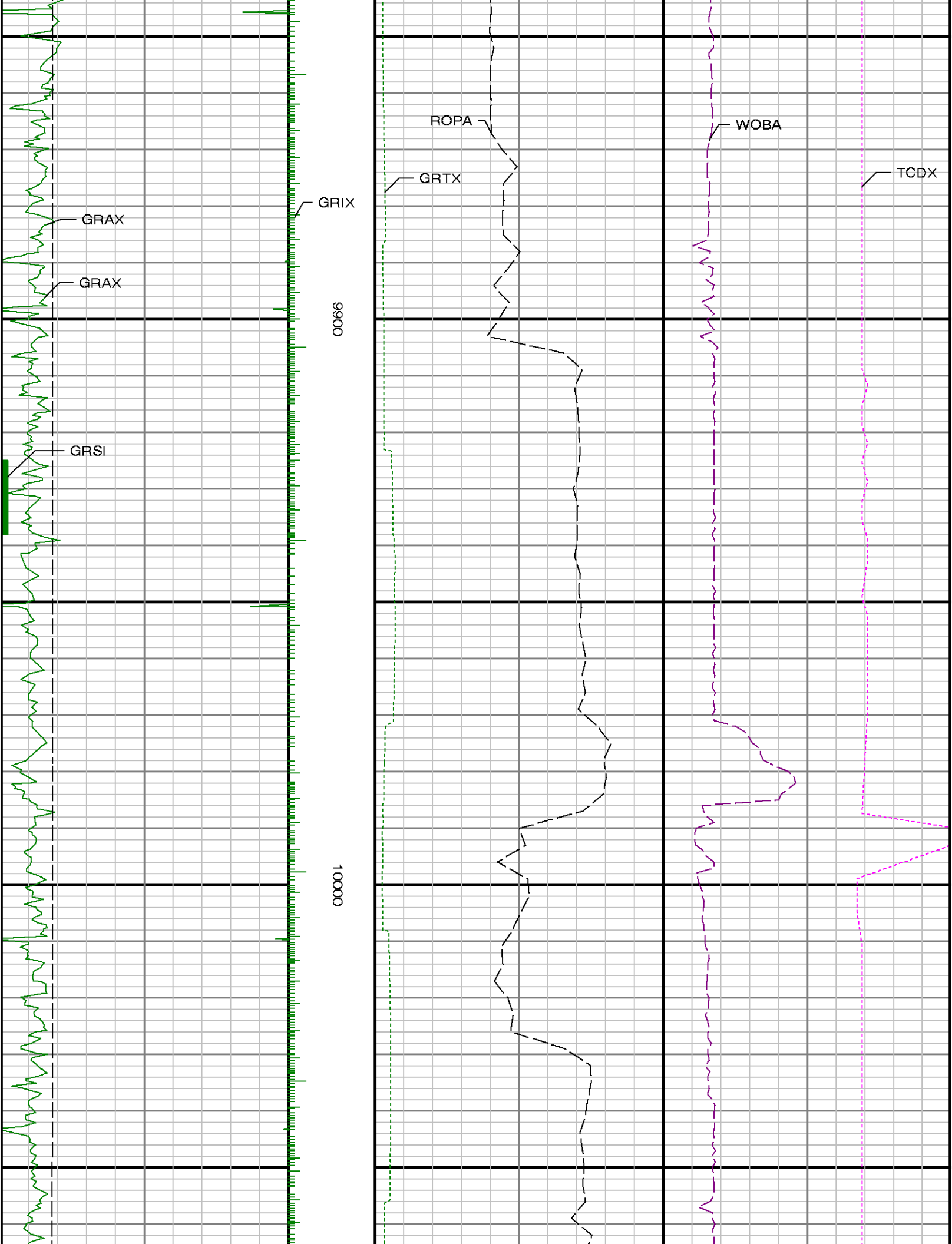


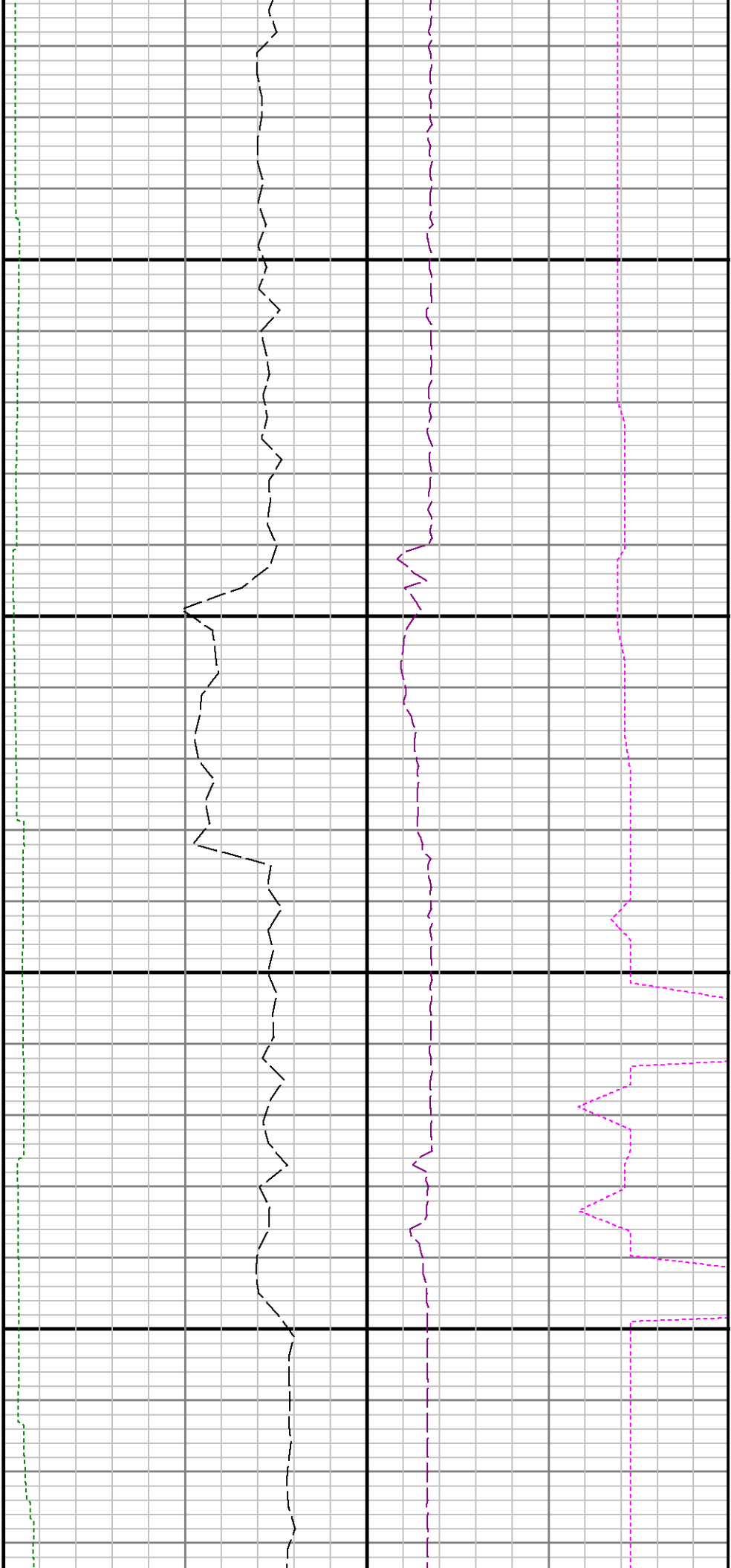
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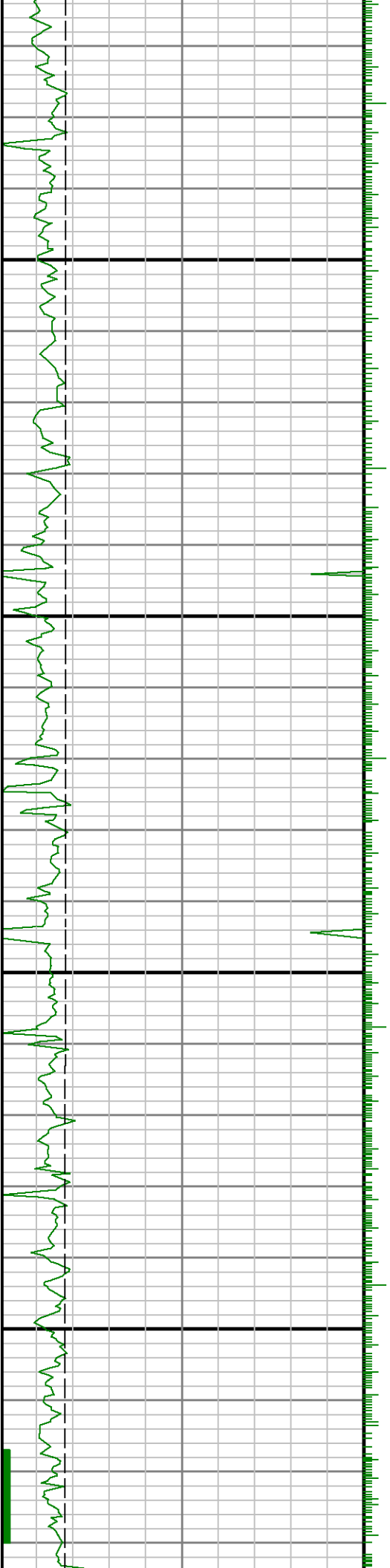


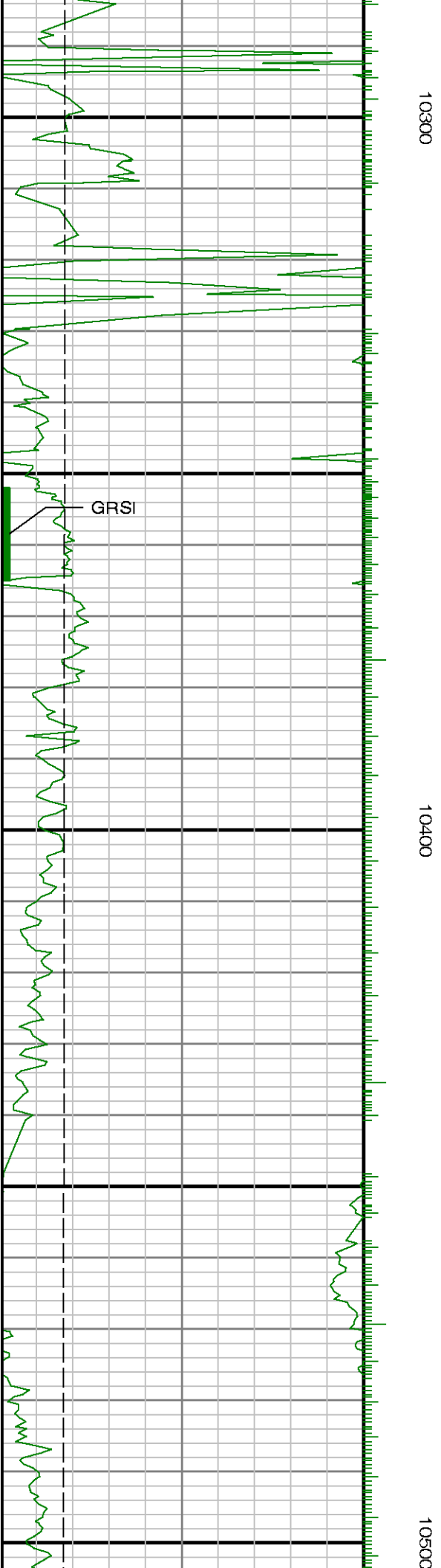
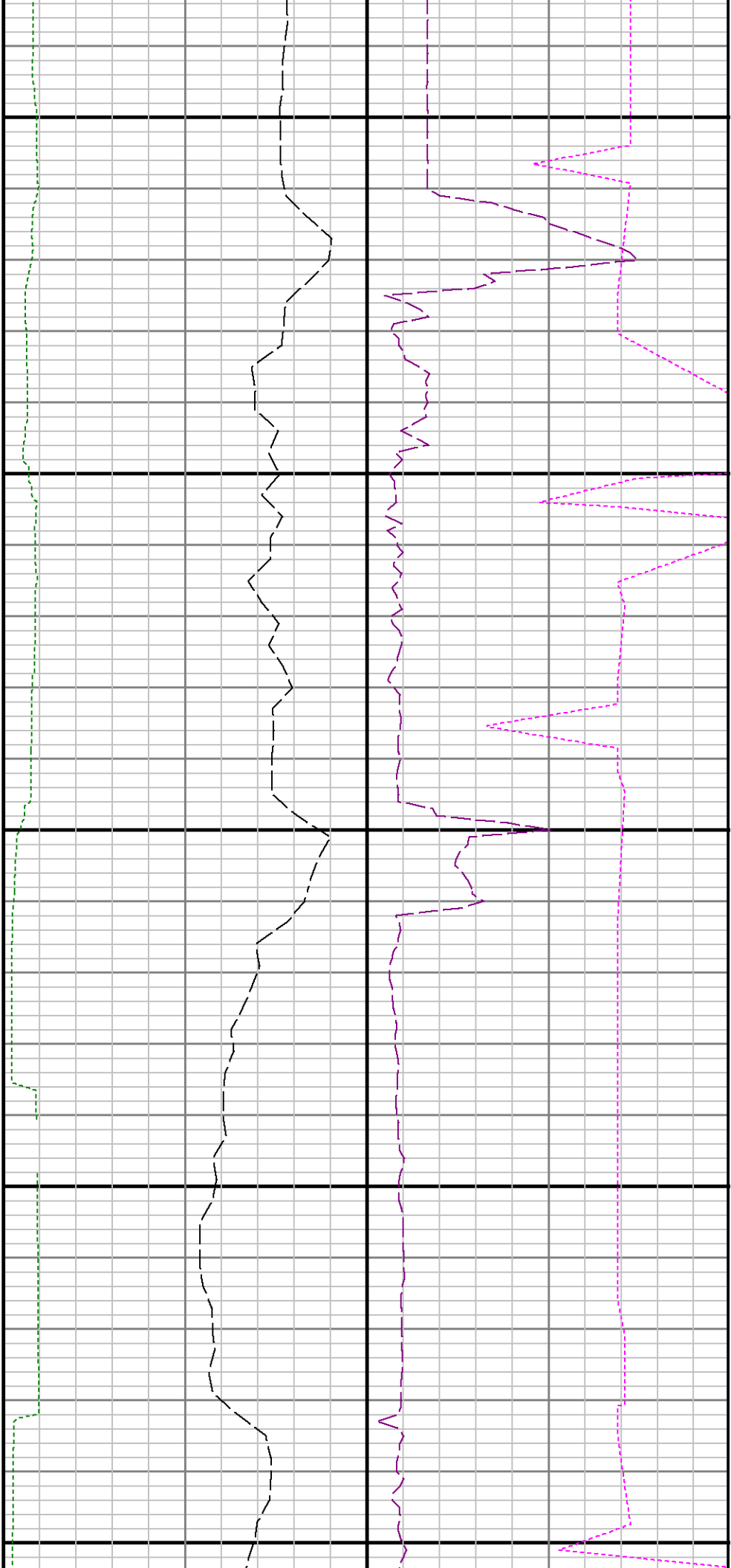


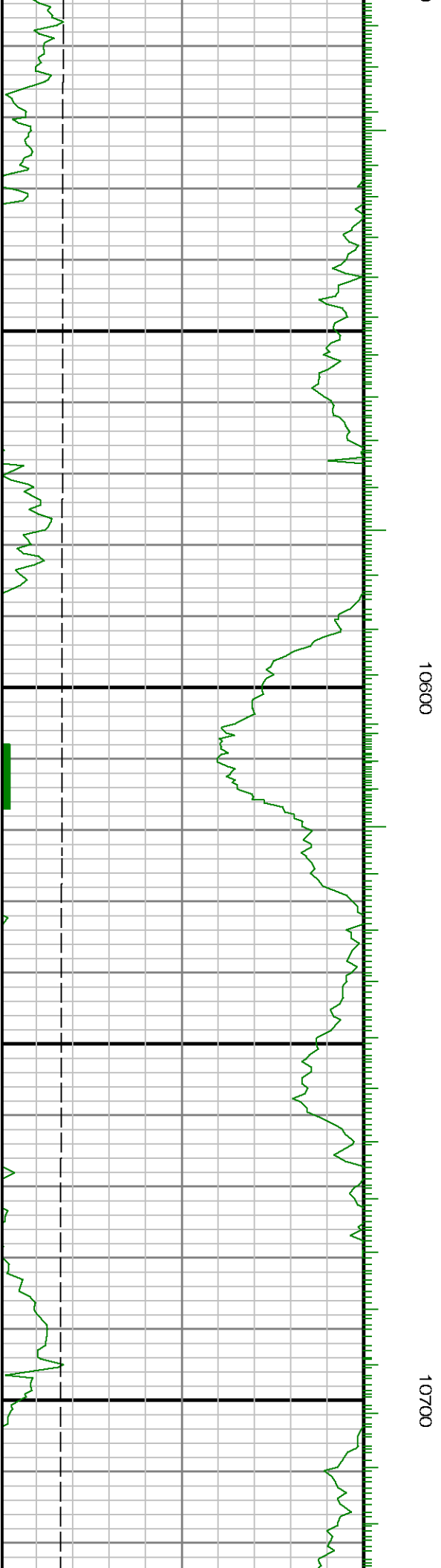
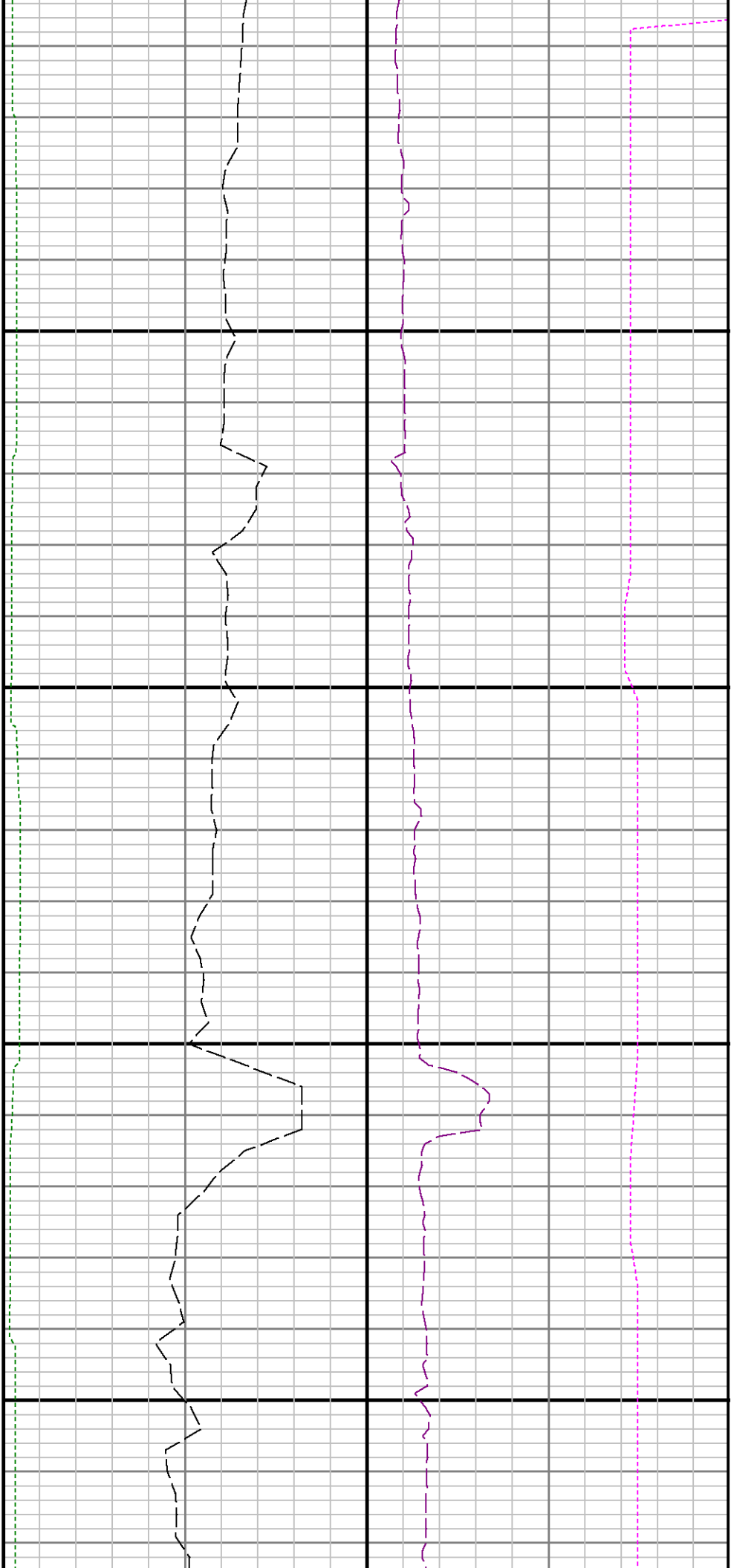


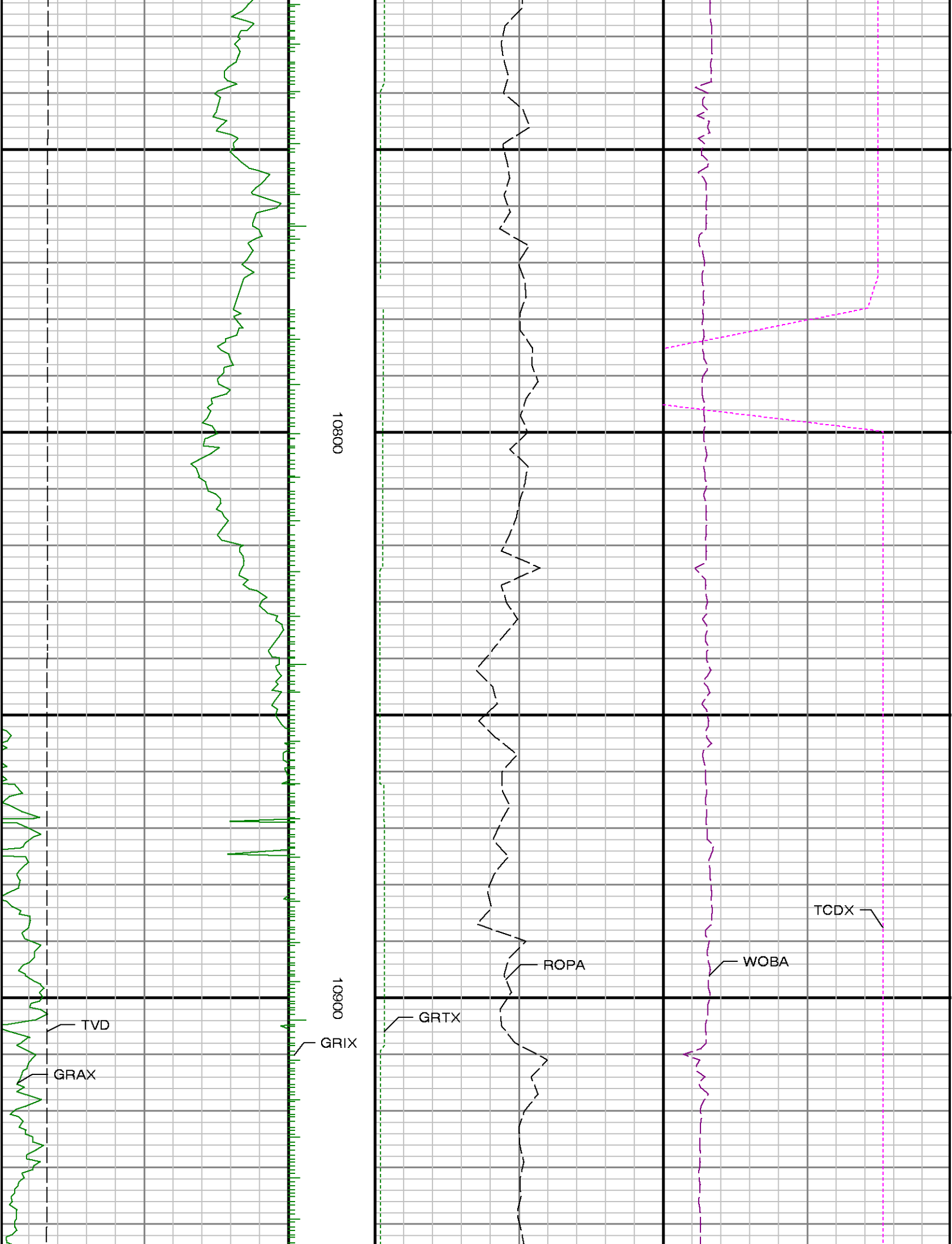
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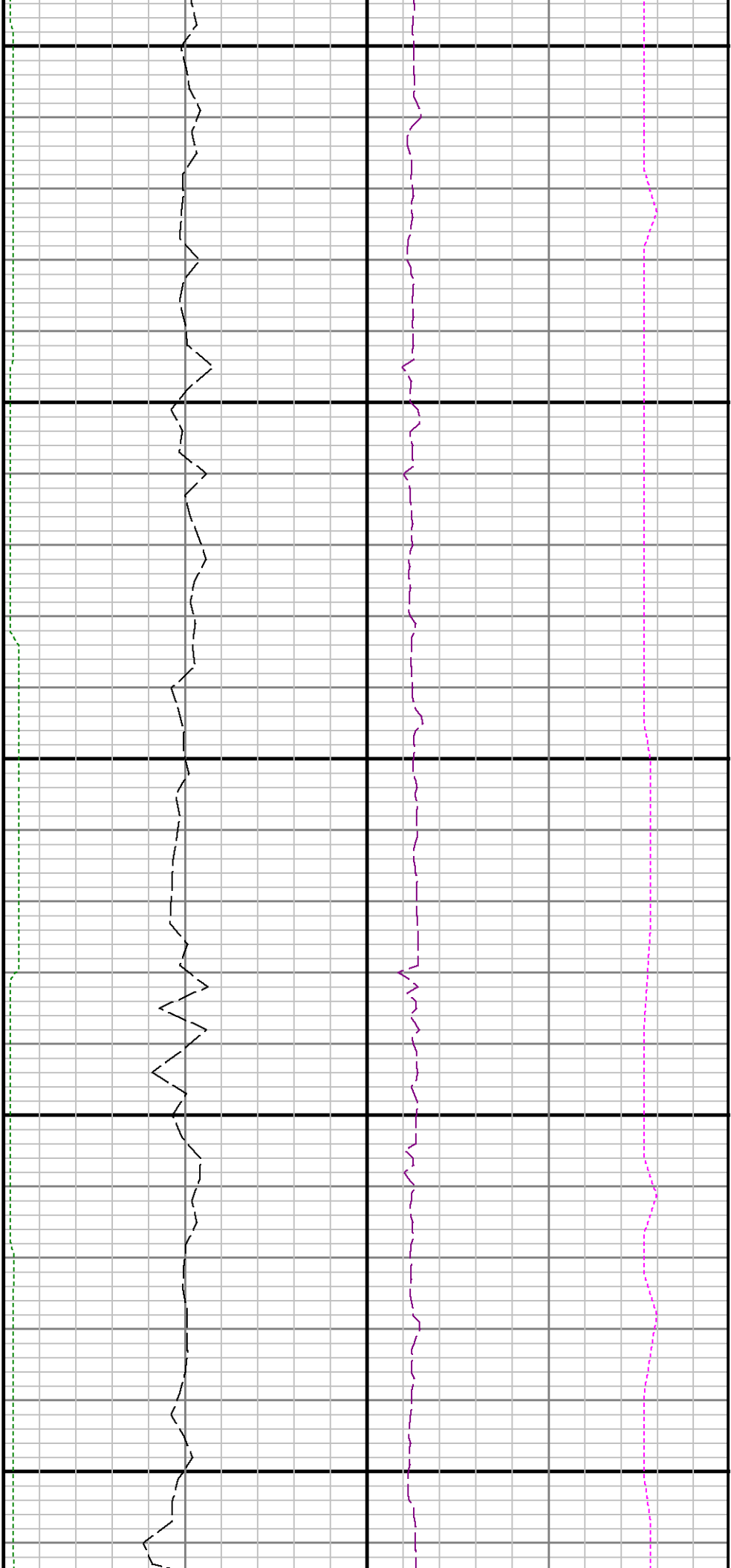
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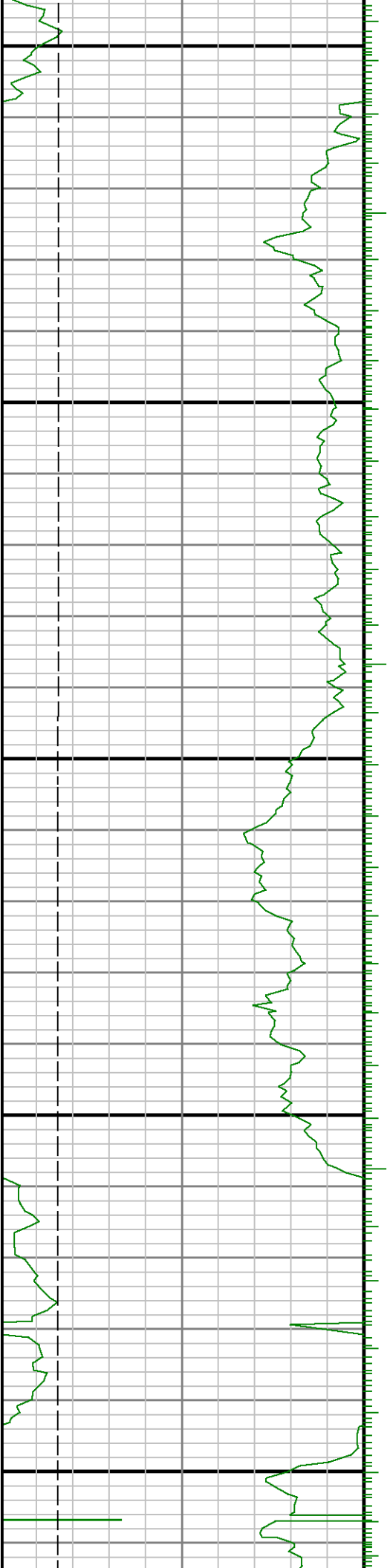


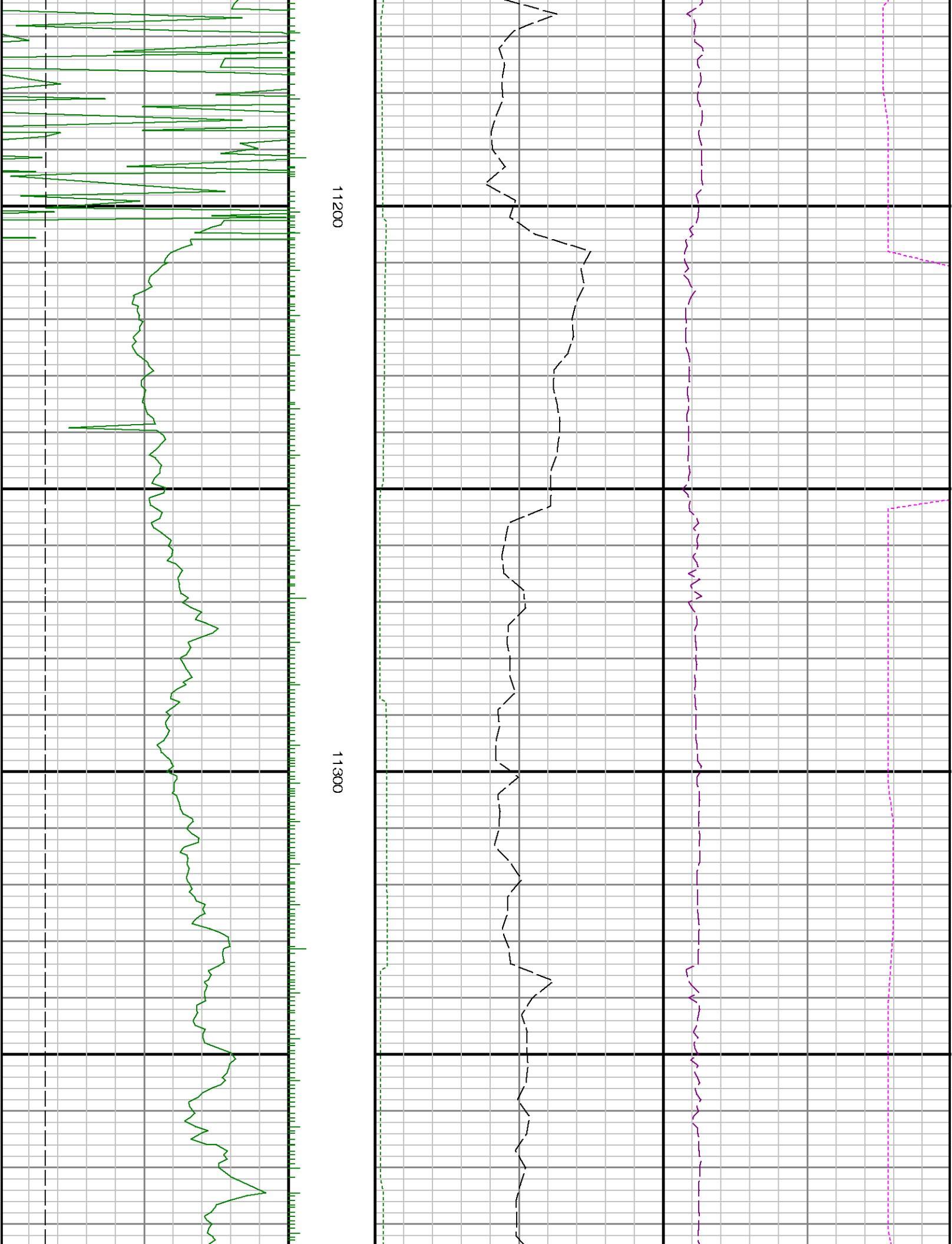


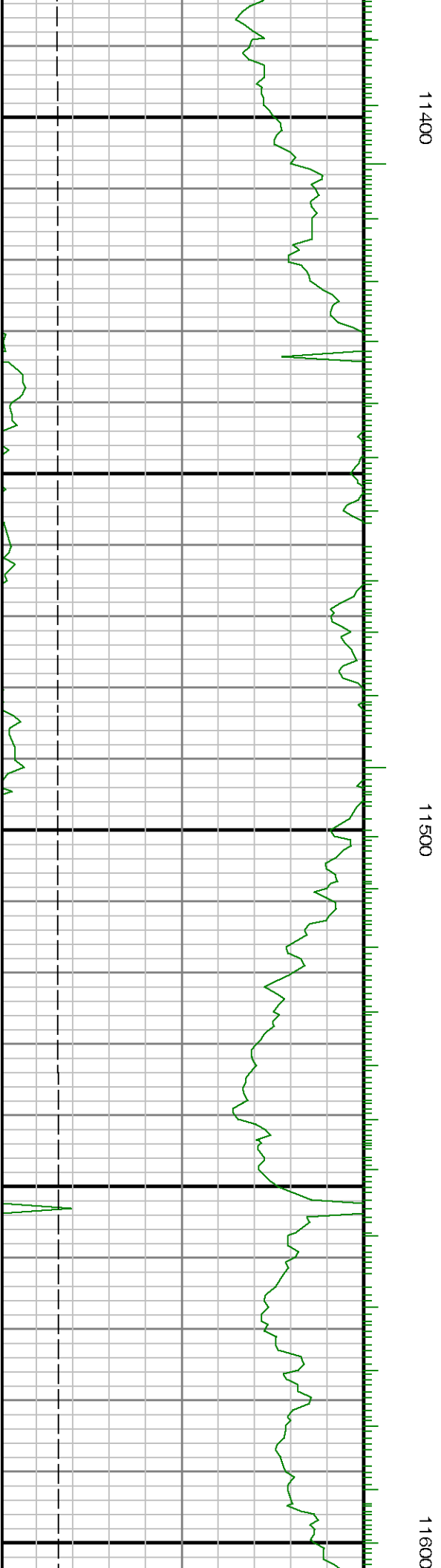
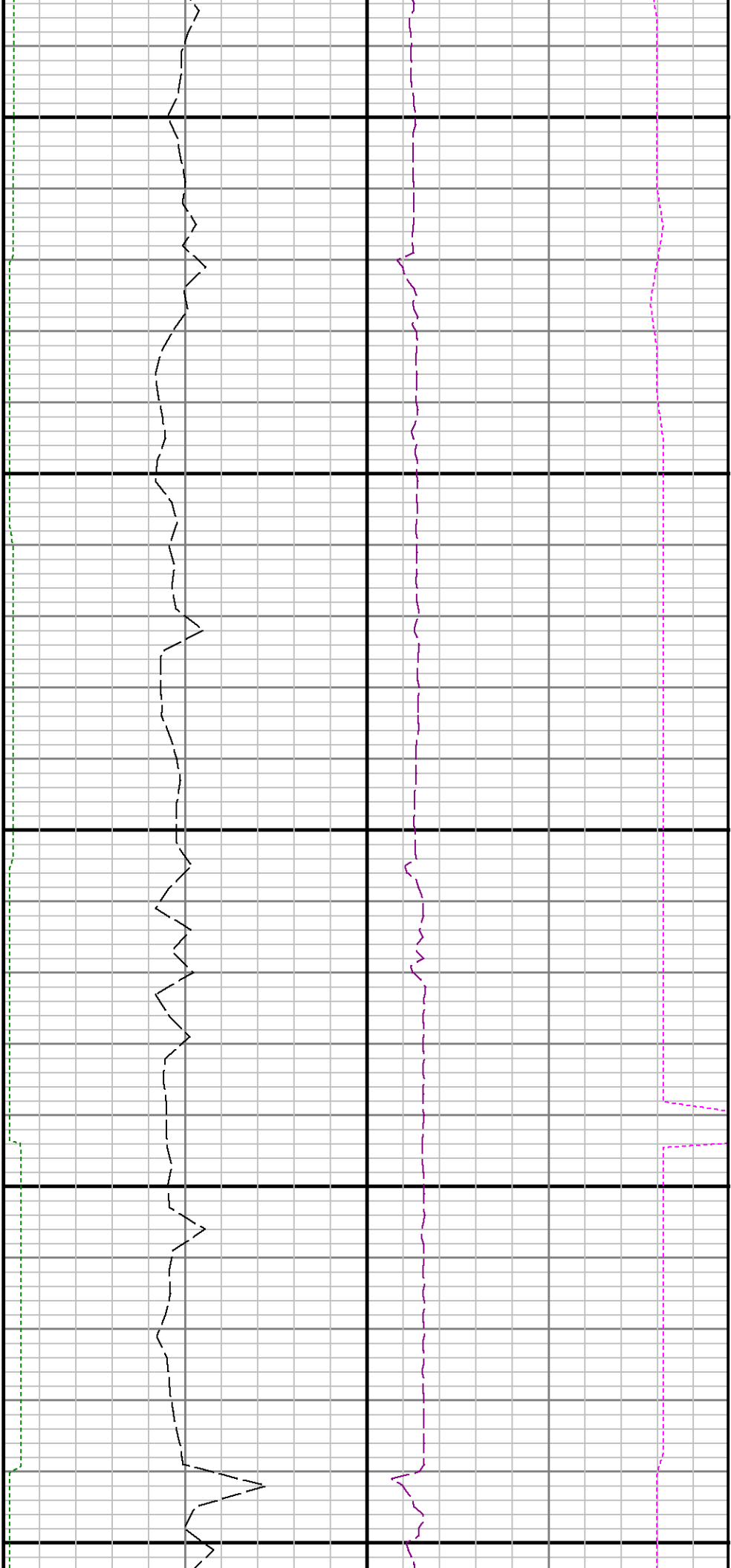


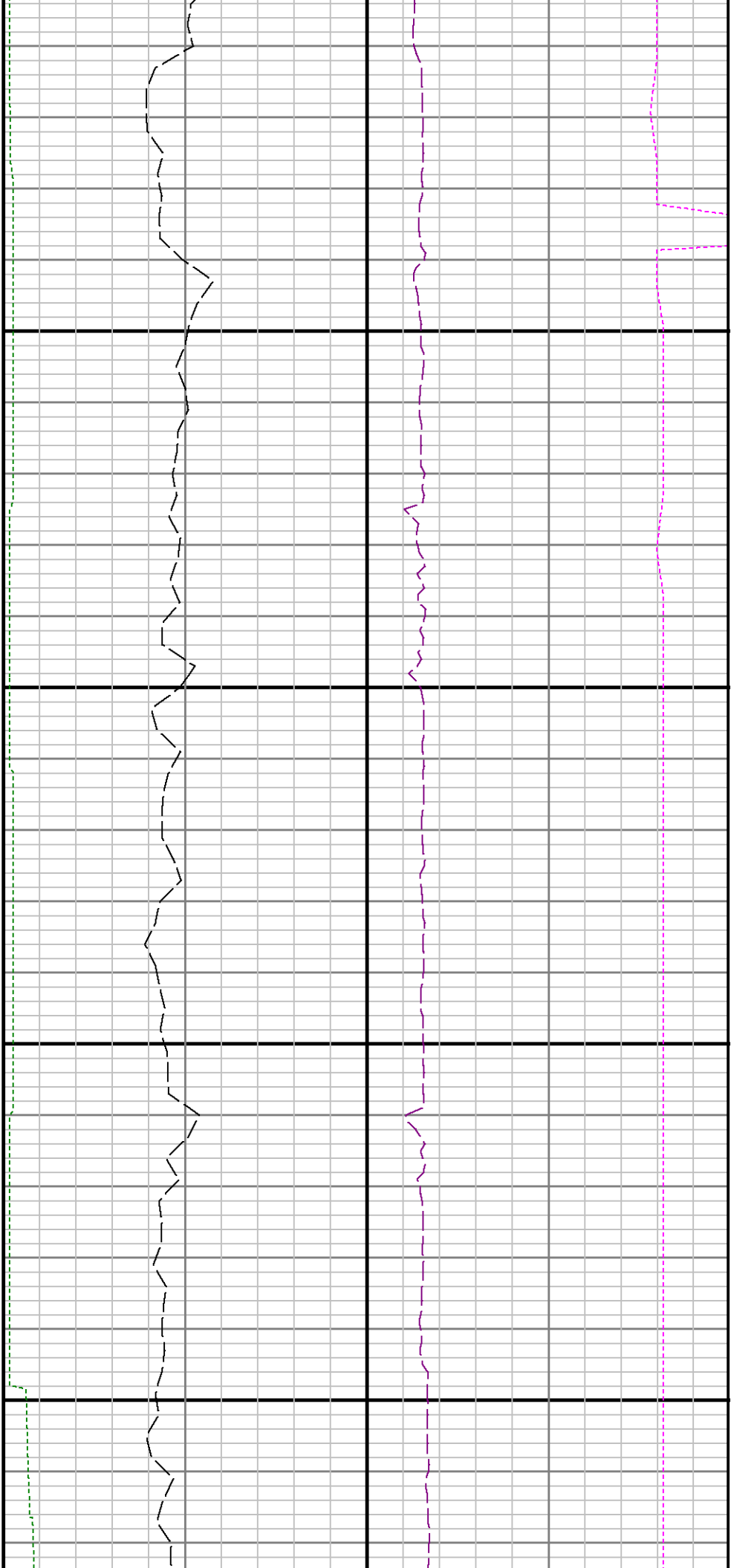
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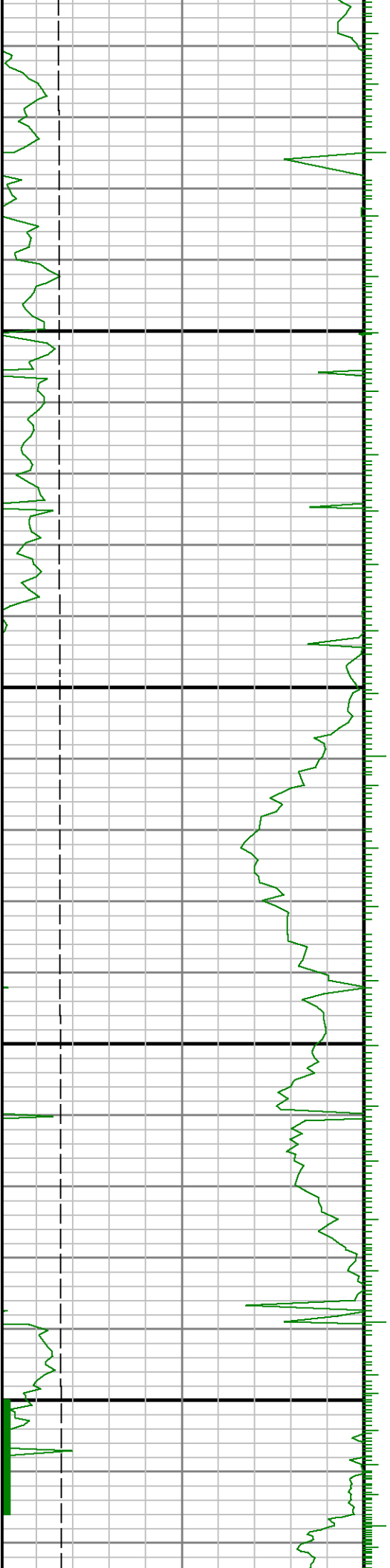


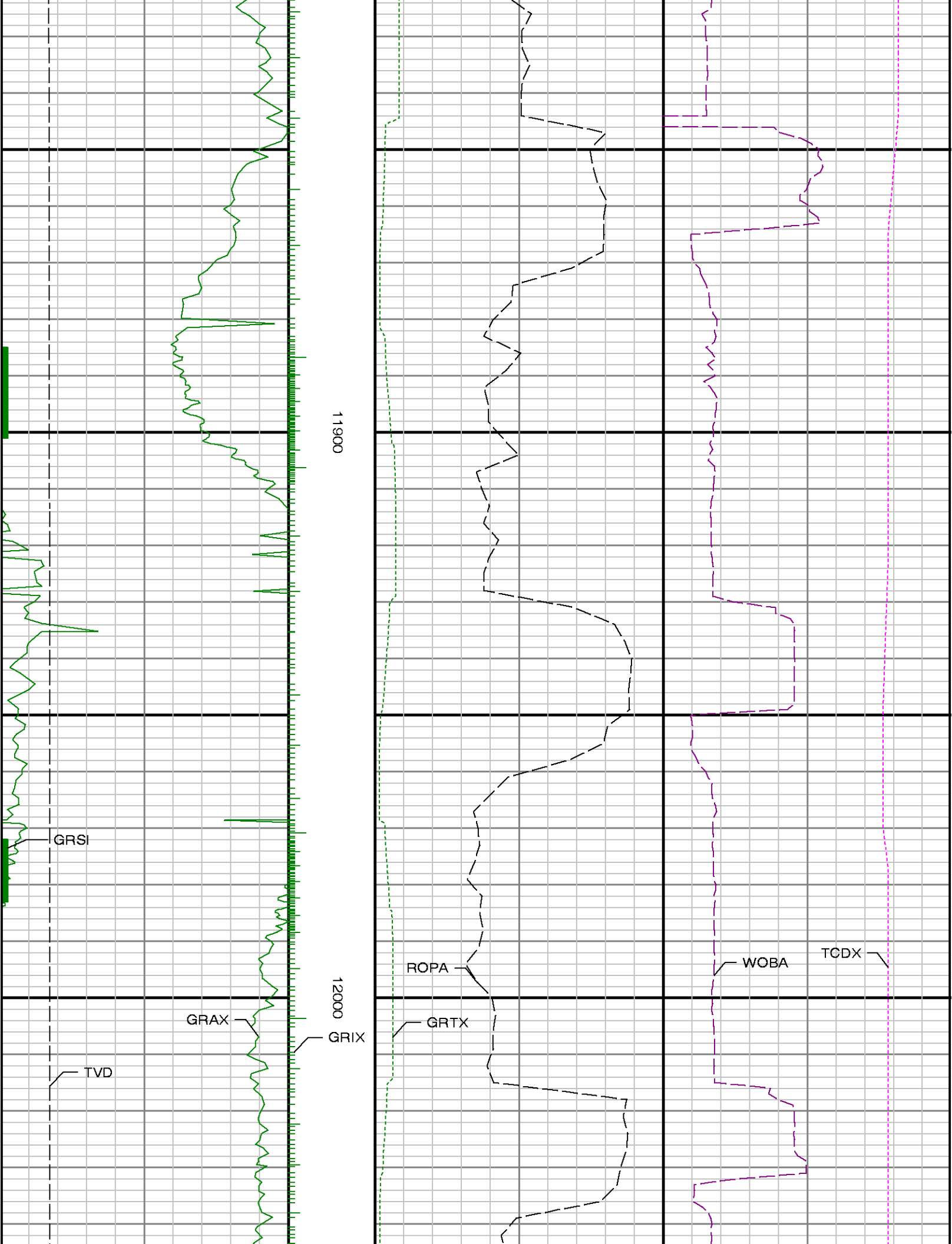


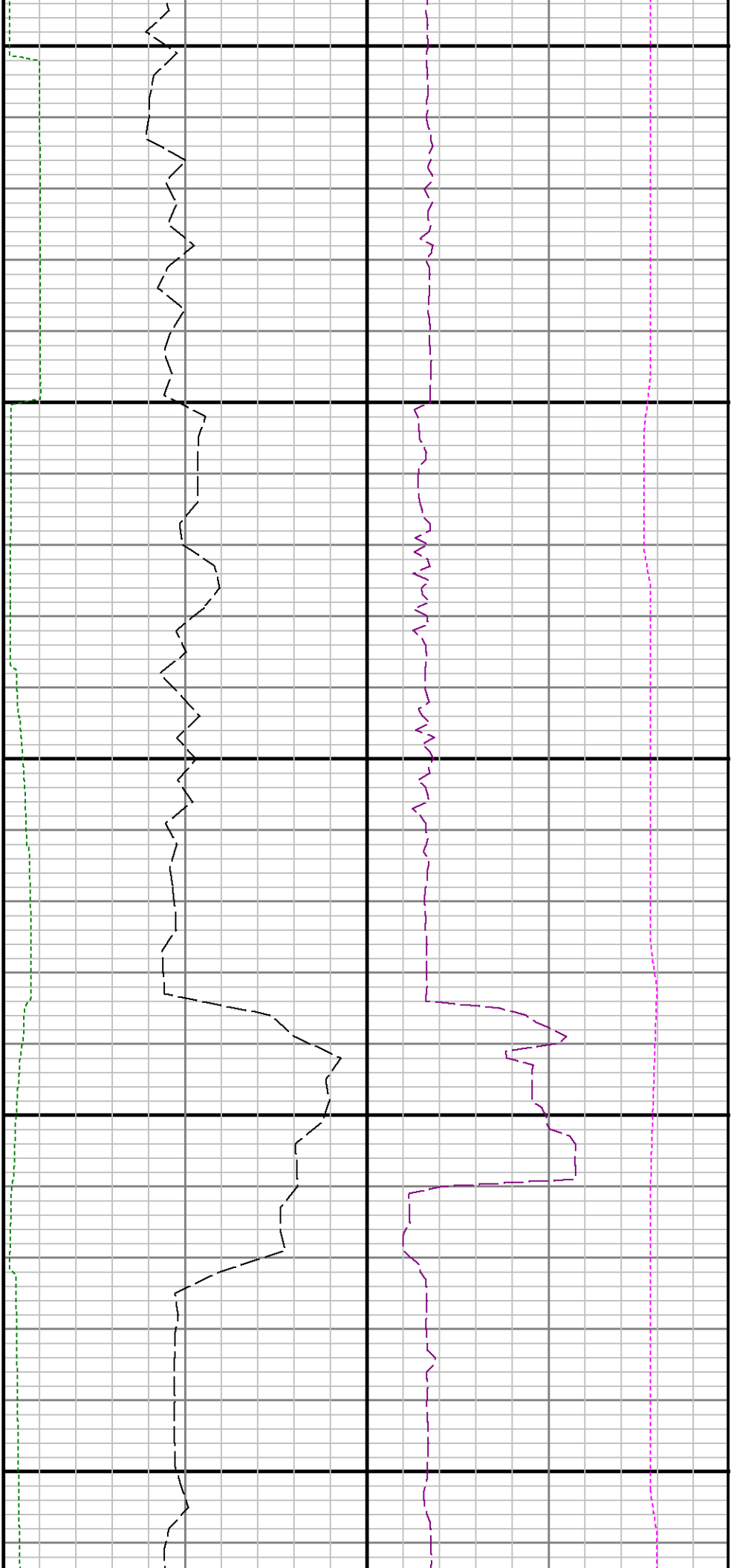


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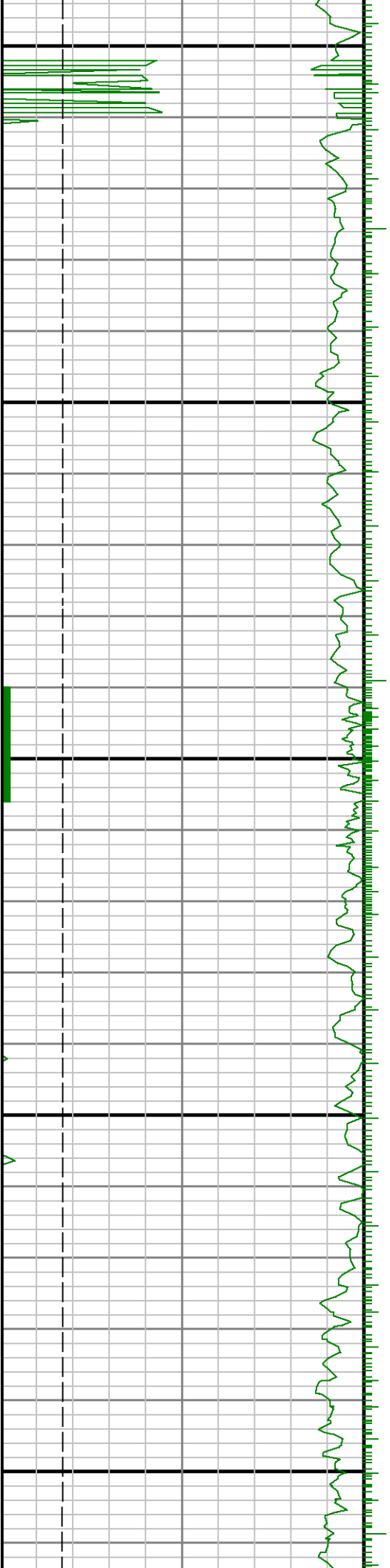


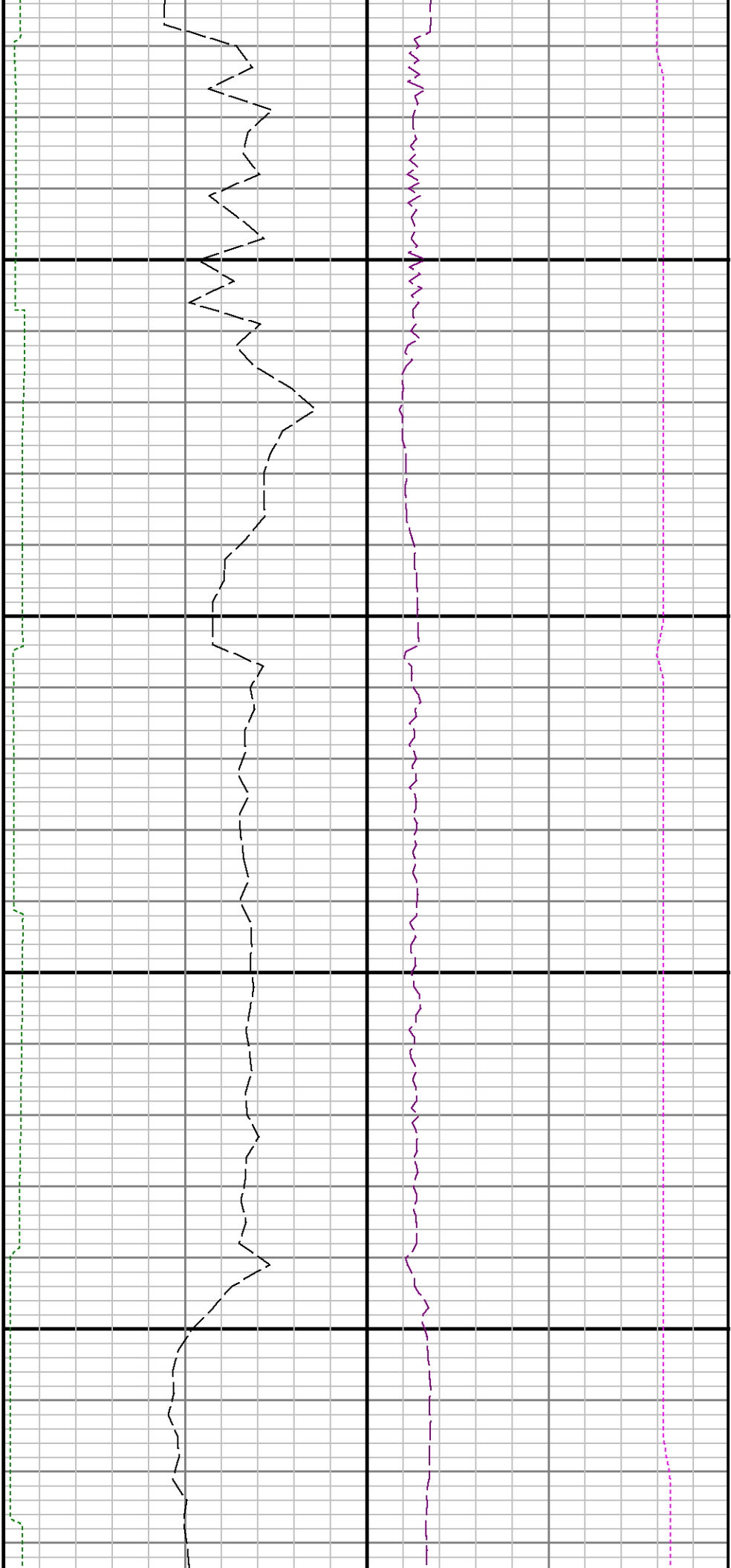




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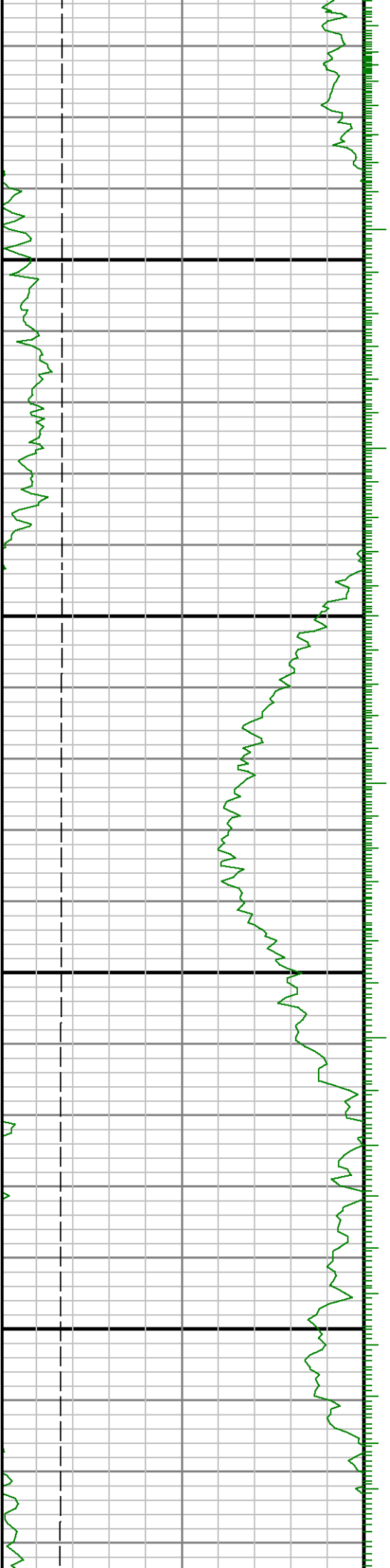
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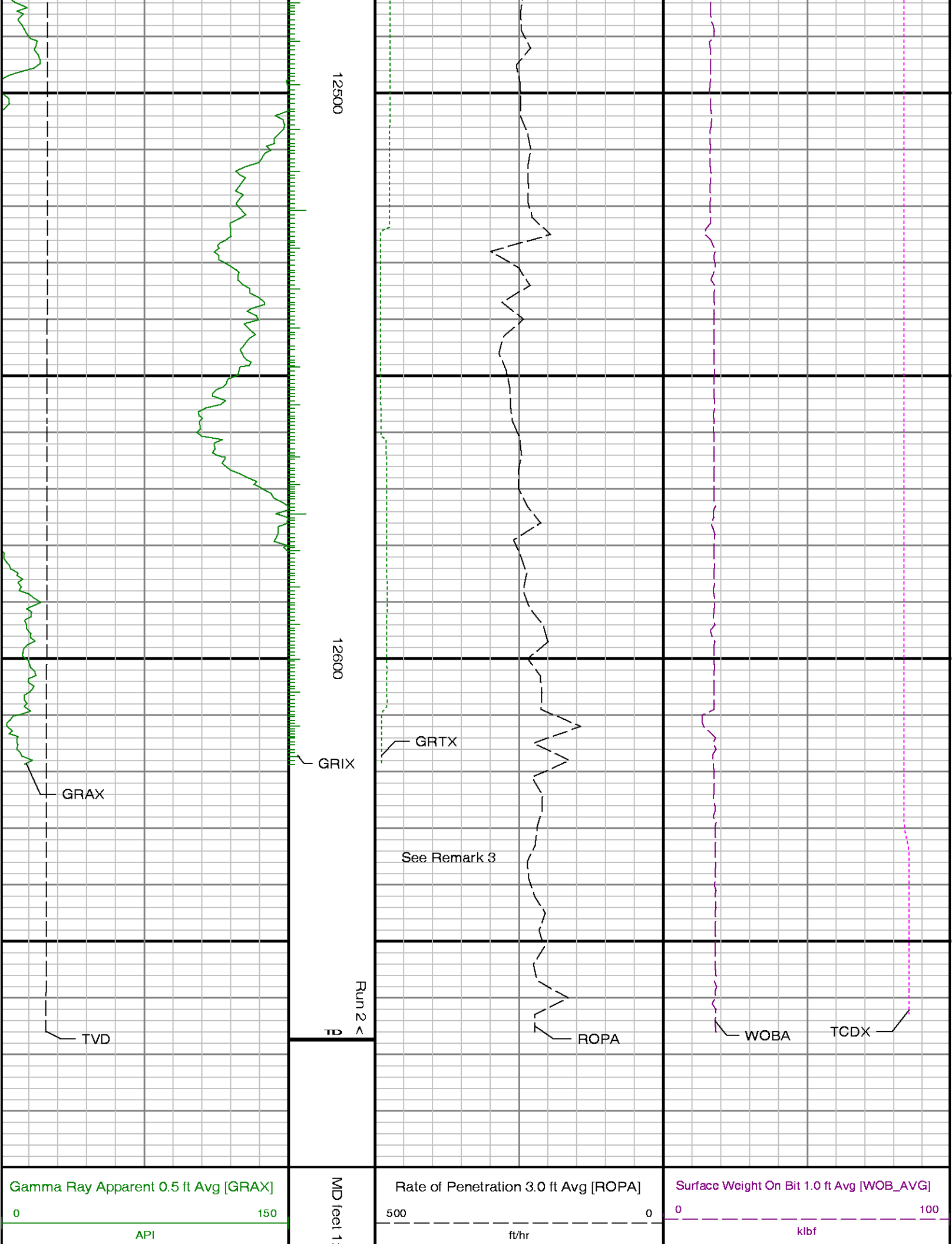




12300

12400





<div>True Vertical Depth [TVD]</div> <div>77006700</div> <div>ft</div>	<div>240</div>	<div>Gamma Time Since Drilled [GRTX]</div> <div>0600</div> <div>min</div>	<div>Downhole Temperature [TCDX]</div> <div>100250</div> <div>degF</div>
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